UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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JOBDIVA, INC.,

                      Plaintiff,

                -v-

MONSTER WORLDWIDE, INC.,

                    Defendant.

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13-cv-8229 (KBF)

OPINION & ORDER

KATHERINE B. FORREST, District Judge:

On November 18, 2013, JobDiva, Inc. ("JobDiva") sued Monster Worldwide,

Inc. ("Monster") for patent infringement. JobDiva's claims relate to four patents:

1.   U.S. Patent No. 7,711,573 (the "'573 Patent"), titled "Resume
Management and Recruitment Workflow System and Method," issued
on May 4, 2010;

2,   U.S. Patent No. 8,234,221 (the "'221 Patent"), titled "Recruitment
Vendor Management System and Method," issued on July 31, 2012;

3.   U.S. Patent No. 8,280,823 (the "'823 Patent"), titled "Recruitment
Management and Recruitment Workflow System and Method," issued
on October 2, 2012; and

4.   U.S. Patent No. 8,463,715 (the "'715 Patent"), titled "Resume
Management and Recruitment Workflow System and Method," issued
on June 11, 2013.

Each of these patents relates to an invention to make the process of providing

access to searching resumes easier and more accurate.

On January 9, 2014, Monster counterclaimed for declarations of non-

infringement and invalidity with regard to each of JobDiva's patents, and for

infringement with regard to its own U.S. Patent No. 5,832,497 (the "'497 Patent"),

titled "Electronic Automated Information Exchange and Management System,"

issued on November 3, 1998. Monster's patent seeks provide a system to manage

the exchange of information through two databases, particularly in the employment

setting. It seeks to permit on-line storing and access to a jobs database through a

search engine and to manage job applications and submissions of resumes.

Before the Court is the parties' request for claim construction with regard to

the following terms in JobDiva's Patents[1]:

> A. "using a computer to improve a precision ratio when searching a resume database," as used in JobDiva's '573 and '823 Patents;
>
> B. "each occurrence of the phrase" / "each occurrence of the . . . phrase," as used in JobDiva's '573, '823, '715, and '221 Patents;

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[1] The parties' Joint Claim Construction and Prehearing Statement listed additional terms as in dispute. During a conference call and then by letter dated July 29, 2014, JobDiva notified the Court that it was withdrawing certain claims, thereby obviating the need for the Court to construe certain terms. (ECF No. 121.) At the Markman hearing, counsel stated that the parties had reached agreement on the term "resume." (See 7/11/14 Tr. at 58, ECF No. 112.)

Certain other terms are very similar to those construed in this decision and thus are not explicitly addressed. These terms, all of which appear in JobDiva's '823 Patent, are:
1. "means for receiving search criteria";
2. "means for sending the result set in a response to the request";
3. "means for sending a request to search the resume database";
4. "means for sending search criteria"; and
5. "means for receiving a result set in response to a database query to the resume database".
If the parties would like additional guidance as to these terms, they should so inform the Court.

Finally, the Court notes that several terms had multiple entries in the parties' Joint Claim Construction and Prehearing Statement. The Court has interpreted each such term consistently across all claims. If the parties require additional, claim-specific guidance as to particular terms, they should so inform the Court.

C. "required term of experience," as used in JobDiva's '573, '823, '715, and '221 Patents;

D. terms referring to satisfying the "job description" or "search criteria," namely:

    a. "when the parsed resume satisfies the job description," as used in JobDiva's '573 Patent;

    b. "parsed resume . . . satisfying the search criteria," as used in JobDiva's '823 Patent;

    c. "matching resume that satisfies the job description," as used in JobDiva's '221 Patent; and

    d. "skill or experience-related phrase includes said at least one required skill or experience-related phrase, or at least one implying phrase for said at least one required skill or experience-related phrase, that satisfies the job description," as used in JobDiva's '715 Patent;

E. "means for receiving a result set in response to the database query," as used in JobDiva's '573, '823, and '715 Patents;

F. "means for sending a database query to the resume database," as used in JobDiva's '573, '823, and '715 Patents;

G. "graphical user interface, comprising a first display region . . .; and a second display region," as used in JobDiva's '221 Patent; and

H. "personal and business-related characteristics that the candidate believes to be relevant to a prospective employer," as used in JobDiva's '221 Patent.

(See Joint Claim Construction and Prehearing Statement, ECF No. 34.)

With respect to Monster's Patent, the parties have requested that the Court construe the following term[2]:

I.   "iterative database query engine," as used in Monster's '497 Patent. (See Joint Claim Construction and Prehearing Statement for Monster Countercl., ECF No. 36.)

The Court held a Markman hearing over two days on July 11, 2014 and August 1, 2014.[3] At that hearing, experts for both sides testified and were subject to cross-examination.

JobDiva proffered the report and testimony of two experts: Michael Mitzenmacher, Ph.D., for the disputed terms appearing in JobDiva's '573, '715, '823, and '221 Patents, and Nathaniel Polish, Ph.D, with regard to the disputed term in Monster's '497 Patent. Monster also proffered the report and testimony of two experts: Jaime G. Carbonell, Ph.D., with regard to the disputed terms in JobDiva's '573, '715, '823, and '221 Patents, and James Allan, Ph.D., with regard to the disputed term in Monster's '497 Patent.

While Markman decisions are considered questions of law (as discussed below), see Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996); Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp., 744 F.3d 1272, 1284 (Fed. Cir. 2014) (en banc), it is impossible to ignore

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[2] The parties have reached agreement regarding the term "means for relating a record of said first database to a record of said second database," as used in Monster's '497 Patent. (See Monster's Reply Claim Construction Brief ("Monster Reply") at 10, ECF No. 70.)

[3] In advance of, and following the Markman hearing, the parties submitted extensive briefing in support of their respective positions. The briefing continued in bits and pieces until September 15, 2014. (See ECF No. 159.)

that when witnesses are examined and then cross-examined before the Court on their respective views as to how one of ordinary skill in the art at the time would understand the intrinsic evidence, the Court does and must assess the demeanor and weigh the credibility of those witnesses in determining which view to follow. The Court is not itself one of ordinary skill in the art in this or most cases. Accordingly, the Court cannot posit its own view.

Here, the parties' expert witnesses offered conflicting interpretations of terms based on their reading of intrinsic evidence from the perspective of one of ordinary skill in the art. The Court had to, and did, assess the strengths and weaknesses of those interpretations and, in doing so, weighed the evidence. There is no other way to describe this process—there are sometimes, and were here, plain factual aspects to claim construction. Thus, where indicated, the Court's determinations regarding the appropriate construction are mixed questions of law and fact.

The Court found a significant difference between the demeanor and credibility of Mitzenmacher and Carbonell. Mitzenmacher was argumentative and at times evasive. The Court was not left with the impression that his views were to be given great weight. In contrast, Carbonell was highly credible and informative. He was forthcoming and clear. The Court is entirely comfortable placing great weight on his views.[4]

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[4] Mitzenmacher and Carbonell disagreed regarding the level of training and experience one skilled in the art would have needed to have had in 1995. (Compare Declaration of Michael Mitzenmacher, Ph.D. in Support of JobDiva's Opening Claim Construction Brief ("Mitzenmacher Decl.") ¶ 9, ECF No. 42, with Declaration of Jeffrey T. Fisher in Support of Monster's Responsive Claim Construction Brief ("Fisher Decl.") Ex. 3 ("Carbonell Decl.") ¶ 17, ECF No. 62.) The Court notes that Mitzenmacher ignores that while converting a resume to XML format may not require experience in

The parties' experts regarding the '497 Patent, Polish and Allan, both seemed credible, though Allan provided significantly more detail than Polish did. As a result, the Court bases its determinations on the weight it gives to the support Polish and Allan presented in their declarations and at the live evidentiary hearing, as well as on the additional evidence in the record with regard to the disputed term in the '497 Patent.

Set forth below are the Court's determinations regarding each of the terms as to which construction has been sought.

I.   THE PATENTS

JobDiva's '573, '823, and '715 Patents share a common specification (the "'573 Specification" or the "Specification"). The '823 and '715 Patents are divisional patents from the application underlying the '573 Patent. The '221 Patent issued from a continuation-in-part application that has substantial overlap with the specification shared by JobDiva's other Patents here at issue.

Resume searching has been in existence for as long as employers have been receiving and reviewing multiple resumes for employment positions. Manual search was the initial method. With the advent of computers, electronic systems were able to improve upon the manual process, resulting in increased speed and improved accuracy.

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natural language processing, "parsing" the resume into searchable phrases does, particularly given that JobDiva's invention anticipates the use of synonyms and alternative phrasing. (See, e.g., Compl. Ex. A, Col. 2, lines 62-65 ("The search should identify any resume that includes the sought after qualification or requirement and should also interpret synonymous or alternative terms to be equivalent to the sought after qualification or requirement.").)

There were, however, certain limitations in prior electronic systems—

limitations which both Monster and JobDiva sought to address in their patents.

JobDiva's '573 Patent describes the invention as a computer system and method for

managing access to a resume database.

The '573 Specification describes certain limitations of prior resume-searching

systems, including text-based searching, which did not account for alternative

terminology or the length and duration of experience. As a result, the prior systems

retrieved a large number of what the Specification refers to as "irrelevant resumes."

(Compl. Ex. A, Col. 2, line 4.) "[T]he precision ratio of prior systems has been

extremely low. For certain technical jobs and jobs that require more than minimal

experience, the precision ratio can be under 5% and at times even below 1%." (Id.

Ex. A, Col. 2, lines 9-13.) To address this issue, certain systems required candidates

"to input the duration of experience that they have in a skill or experience-related

phrase." (Id. Ex. A, Col. 2, lines 17-18.) The Specification describes three principal

disadvantages of these systems: they prolonged the set-up process (id. Ex. A, Col. 2,

lines 28-38), they were not dynamic (id. Ex. A, Col. 2, lines 39-47), and they utilized

the processor-intensive operation of tallying the duration of experience for a skill or

experience-related phrase at search time (id. Ex. A, Col. 2, lines 48-56).

JobDiva's invention was designed to provide tools to reduce the number of

resumes returned from searches "by identifying a set of candidates who can possibly

satisfy the qualifications and requirements sought by a hiring manager." (Id. Ex. A,

Col. 2, lines 60-62.) The invention seeks to provide a method of identifying "most

resumes that can possibly include the sought after qualification or requirement" (id. Ex. A, Cols. 2-3, lines 66-1) and "avoid identifying resumes that cannot possibly include the sought after qualification or requirement" (id. Ex. A, Col. 3, lines 1-2).

The system or method involves receiving a resume that includes at least one skill or experience-related phrase; storing the resume in a resume database; parsing the resume into searchable segments; computing a term of experience for each skill or experience-related phrase; and storing a parsed resume in the resume database (which involves, inter alia, converting the natural-language resume into XML format). (Id. Ex. A, Col. 3, lines 11-17, 35-39.) Because resumes typically contain date ranges on a job-by-job basis, and each job typically requires employees to practice more than one skill, a candidate's term of experience for a particular skill is referred to as a "maximum duration." (See, e.g., Compl. Ex. A, Col. 25, lines 42-46 ("[T]he maximum possible duration . . . of experience of an experience-related phrase is the total duration of all the jobs during which the experience-related phrase appeared in [the resume].").) A hiring manager can query the resume database to receive resumes matching his or her search criteria, including a skill or experience-related phrase and a required minimum duration of experience. (Id. Ex. A, Col. 5, lines 14-18.) That is, the hiring manager can search for only those candidates with particular skills and experience level in those skills.

The figures in the '573 specification provide further description of the invention. Figure 2 shows a recruiter and candidate on opposite sides of a network that feeds into a common "resume management and recruitment workflow system."

Figure 4 illustrates a process of converting a natural-language resume into an XML file that then resides in the memory of a database. Figure 5 shows a number of tables flowing out of the database: (1) a candidate table, containing, inter alia, work experience data; (2) a mapping table, containing boxes for "phrase," "related broad phrases," and "related narrow phrases"; (3) a job table, containing information regarding, inter alia, job requirements; (4) an XML table, containing searchable data extrapolated from the resume as laid out in Figure 4; and (5) a resume table, containing the text of the resume and accompanying documents.

Figure 9 shows an exemplar search process. A search is "receive[d]," "including skills or experience related phrases and a duration of experience for each." Further in the process, the Figure states: "in a split-screen, view the candidate attributes and resumes of each candidate in the list of candidates meeting the search criteria."[5]

Monster's '497 Patent is a computer-implemented system for posting and searching job advertisements online. It provides a platform for both employers posting job positions and individuals searching for jobs. It also manages the applications for such jobs and submission of resumes, application letters, and other relevant documents. (Monster Worldwide's Answer and Counterclaims Ex. A ("'497 Patent"), Col. 1, lines 7-18, ECF No. 19.) The invention allows the database to be

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[5] While there are certain differences between the specification of the '573 Patent and that of the continuation-in-part '221 Patent, the broad outlines described above are essentially consistent between the two.

updated to relate candidates to jobs—that is, to reflect that a candidate has applied

for a particular position. Figure 1 shows a schematic of the system.

II.   LEGAL STANDARDS FOR CLAIM CONSTRUCTION

As stated above, claim construction is generally a question of law for the

Court. See Markman, 52 F.3d at 979. Determining the meaning of terms within a

claim assists the fact finder in making subsequent and ultimate decisions as to

whether an invention has in fact been infringed, or is in fact valid. From time to

time, the Court's determination of disputed factual issues is necessary to the

determination of the appropriate construction of a term. See Markman v. Westview

Instruments, Inc., 517 U.S. 370, 389 (1996) ("[C]redibility judgments have to be

made about the experts who testify in patent cases, and in theory there could be a

case in which a simple credibility judgment would suffice to choose between experts

whose testimony was equally consistent with a patent's internal logic."); Dow

Corning Wright Corp. v. Osteonics Corp., 939 F. Supp. 65, 68 (D. Mass. 1996)

("Although [plaintiff] contends that certain credibility questions . . . remain,

Markman seems to place such determinations, insofar as they relate to claim

construction, entirely within the province of the trial judge."). Resolution of some

factual disputes cannot wait until trial. The purpose of claim construction is to

define terms so that, inter alia, the jury may be properly instructed. See Sulzer

Textil A.G. v. Picanol N.V., 358 F.3d 1356, 1366 (Fed. Cir. 2004) ("[T]he trial court

in a patent case must at minimum take steps to assure that the jury understands

that it is not free to consider its own meanings for disputed claim terms and that

the district court's claim construction, determined as a matter of law, is adopted and applied by the jury in its deliberation of the facts."). If there are disputed factual issues the resolution of which is required for claim construction, a court should hold an evidentiary hearing during which each side has an opportunity to present evidence and to examine and cross-examine witnesses. The Court held such an evidentiary hearing here.

For instance, in construing the meaning of a term, the issue is not what that term would mean to an average layperson, but what that term would have meant to one "of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (citations omitted). A determination as to the type and level of skill of one of ordinary skill in the art is a factual determination. See Buzzelli v. Minn. Mining & Mfg. Co., 480 F.2d 541, 542 (6th Cir. 1973) (explaining that ascertaining "the level of ordinary skill in the art during the questioned period" is a "factual inquir[y]"). If two experts qualified to present the view of one of ordinary skill in the art differ in their views (which is frequently the case and is here), the Court's choice between the two views is a factual determination. See Lucas Aerospace, Ltd. v. Unison Indus., L.P., 890 F. Supp. 329, 333 n.7 (D. Del. 1995) ("When two experts testify differently as to the meaning of a technical term, and the court embraces the view of one, the other, or neither while construing a patent claim as a matter of law, the court has engaged in weighing evidence and making credibility determinations. If those possessed of a higher

11

commission wish to rely on a cold written record and engage in de novo review of all claim constructions, that is their privilege. But when the Federal Circuit Court of Appeals states that the trial court does not do something that the trial court does and must do to perform the judicial function, that court knowingly enters a land of sophistry and fiction.").

Although terms are generally construed as they would be understood by one of ordinary skill in the art, it is possible for a patentee to have set forth a particular and different meaning for a term within a claim; in such a case, the lexicography of the patentee governs. See, e.g., Silicon Graphics, Inc. v. ATI Techs., Inc., 607 F.3d 784, 789 (Fed. Cir. 2010); Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed. Cir. 1995) ("The terms in a claim . . . are not given their ordinary meaning to one of skill in the art when it appears from the patent and file history that the terms were used differently by the applicant.").

A.   Evidence Used in Claim Construction

A court may use intrinsic—and, if necessary, extrinsic—evidence in construing claims. See Nazomi Commc'ns, Inc. v. Arm Holdings, PLC, 403 F.3d 1364, 1368 (Fed. Cir. 2005) (instructing courts to look to intrinsic evidence first).

Intrinsic evidence includes the claims and the specification in the patent itself, as well as the patent's prosecution history. "Foremost among the tools of claim construction is of course the claim language itself, but other portions of the intrinsic evidence are clearly relevant, including the patent specification and prosecution history." All Dental Prodx, LLC v. Advantage Dental Prods., Inc., 309

F.3d 774, 780 (Fed. Cir. 2002); see also Phillips, 415 F.3d at 1312 ("It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The specification is the "single best guide to the meaning of a disputed term." Phillips, 415 F.3d at 1315 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)) (internal quotation mark omitted); see also On Demand Mach. Corp. v. Ingram Indus., Inc., 442 F.3d 1331, 1338, 1340 (Fed. Cir. 2006) ("[T]he scope and outer boundary of claims is set by the patentee's description of his invention," id. at 1338, and "the claims cannot be of broader scope than the invention that is set forth in the specification," id. at 1340). However, although specifications contain one or more examples of the embodiment of an invention, they need not contain every possible embodiment. Therefore, courts should not read into the claims limitations based on the embodiments in the specification. See Phillips, 415 F.3d at 1323; see also Innogenetics, N.V. v. Abbott Labs., 512 F.3d 1363, 1371-72 (Fed. Cir. 2008) ("[The defendant] argues that a patent can never be literally infringed by embodiments that did not exist at the time of filing. Our case law allows for after-arising technology to be captured within the literal scope of valid claims that are drafted broadly enough."). In patents with multiple claims using similar terms, such terms should be construed consistently across claims. Southwall Techs., Inc., 54 F.3d at 1579 ("[C]laim terms must be interpreted consistently.").

Intrinsic evidence must be read from the perspective of one skilled in the art. One skilled in the art is "deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Phillips, 415 F.3d at 1313. In many patent cases, the parties proffer expert statements (in the form of reports) and testimony (either live or by deposition) as to how one of ordinary skill in the art would interpret a claim or specification. In effect, a form of what is typically considered extrinsic evidence is utilized to enable interpretation of the intrinsic evidence. If, as part of an evidentiary hearing in which the experts are exposed to cross-examination—i.e., they are not merely providing a "tutorial" not subject to cross-examination (which can have no true evidentiary value)—the experts do not agree, then the Court's determination regarding which of the competing interpretations is correct constitutes a factual finding. Thus, factual findings may be part of claim construction even when the Court's determination is based solely on intrinsic evidence.

Several aspects of the patent prosecution history can be of significant use during claim construction. Statements the patentee may have made in connection with patent prosecution are binding if used to obtain patentability. See Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1326 (Fed. Cir. 2002) ("[T]he prosecution history (or the file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance." (quoting Standard Oil Co. v. Am. Cyanamid Co.,

774 F.2d 448, 452 (Fed. Cir. 1985)) (internal quotation marks omitted)); see also

Kripplez v. Ford Motor Co., 667 F.3d 1261, 1266 (Fed. Cir. 2012) ("A patentee's

statements during reexamination can be considered during claim construction, in

keeping with the doctrine of prosecution disclaimer."). The prosecution history

provides evidence of how the patentee understood and explained his invention to

the patent office.[6] Phillips, 415 F.3d at 1317.

     In connection with patents that are part of an extended family of patents, a

patentee's disclaimers made during prosecution are relevant with regard to both the

patent at issue and related or "sibling" patents. See Microsoft Corp., v. Multi-Tech

Sys., Inc., 357 F.3d 1340, 1349-50 (Fed. Cir. 2004). Statements made by a patentee

during prosecution prevent claim terms from becoming ever-changing as the need

and situation changes. See Southwall Techs., 54 F.3d at 1578 ("A patentee may not

proffer an interpretation for the purposes of litigation that would alter the

indisputable public record consisting of the claims, the specification and the

prosecution history, and treat the claims as a 'nose of wax.'").[7]

     Parties do not always agree, as is the case here, that a particular claim

requires construction. There are numerous instances in which one party asserts

that the plain and ordinary meaning informs one of ordinary skill in the art of all

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[6] In addition, the patent examiner is considered to be one of ordinary skill in the art. See St. Clair
Intellectual Prop. Consultants, Inc. v. Canon Inc., 412 F. App'x 270, 276 (Fed. Cir. 2011); In re Lee,
277 F.3d 1338, 1345 (Fed. Cir. 2002). Statements made by the examiner regarding how he or she
understands a certain term are thus intrinsic evidence to which the Court may refer when
construing terms.

[7] If necessary, courts may refer to extrinsic evidence during claim construction. Phillips, 415 F.3d at
1317. Dictionaries used by one of ordinary skill in the art, treatises, and expert testimony are all
routine forms of extrinsic evidence. See id.

that he or she needs to know, while an opposing party strongly disputes that position. In such cases, the Court ordinarily should construe the claim. "A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when . . . reliance on a term's 'ordinary' meaning does not resolve the parties' dispute. . . . In this case, . . . claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit." O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1361 (Fed. Cir. 2008).

B.   The Preamble of a Patent

Generally, a preamble does not limit a claim. Am. Med. Sys., Inc. v. Biolitec, Inc., 618 F.3d 1354, 1358 (Fed. Cir. 2010). Under certain circumstances, however, preambles are deemed limitations. See Hearing Components, Inc. v. Shure Inc., 600 F.3d 1357, 1366 (Fed. Cir. 2010) ("A preamble to a claim may or may not be limiting, depending on the circumstances."), abrogated on other grounds by Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120 (2014); Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) ("Whether to treat a preamble as a limitation is a determination 'resolved only on review of the entire[ ] . . . patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.'" (quoting Corning Glass Works v. Sumitomo Elec. U.S.A., Inc., 868 F.2d 1251, 1257 (Fed. Cir. 1989))). "No litmus test defines when a preamble limits claim scope." Catalina, 289 F.3d at 808 (citing Corning Glass, 868 F.2d at 1257). Generally, a preamble limits an invention when

16

it recites essential structure or steps, or when it gives "life, meaning, and vitality" to a claim. Id. (quoting Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305 (Fed. Cir. 1999)) (internal quotation mark omitted); see also NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1306 (Fed. Cir. 2005) ("When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention." (quoting Eaton Corp. v. Rockwell Int'l Corp., 323 F.3d 1332, 1339 (Fed. Cir. 2003))); Pitney Bowes, 182 F.3d at 1305.

In addition, clear reliance on a preamble during patent prosecution transforms the preamble into a claim limitation. See Hearing Components, 600 F.3d at 1366; Jansen v. Rexall Sundown, Inc., 342 F.3d 1329, 1333 (Fed. Cir. 2003); In re Cruciferous Sprout Litig., 301 F.3d 1343, 1347 (Fed. Cir. 2002); Catalina, 289 F.3d at 808; Interwoven, Inc. v. Vertical Computer Sys., Inc., No. CV 10-04645 RS, 2014 WL 490996, at *3 (N.D. Cal. Feb. 4, 2014). By contrast, a preamble phrase is not a claim limitation if the applicant did not rely on it to define the invention or to distinguish the prior art, and the phrase is not necessary to understanding the claim body. See Catalina, 289 F.3d at 810. Preambles merely describing the use of an invention generally do not limit claims. Id. at 809. This is because an inventor is entitled to the benefit of all of the uses to which his or her invention may be put. Id.

C.   Claims

The Patent Act provides that a "specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as his invention." 35 U.S.C. § 112(b).

1.   Means-plus-function claims

Section 112(f) of the Patent Act provides for means-plus-function claims: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure . . . in support thereof, and such claim shall be construed to cover the corresponding structure . . . described in the specification and equivalents thereof." Id. § 112(f); see also Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1210 (Fed. Cir. 2003).

"Claims written in means-plus-function form are interpreted to cover the structure set forth in the specification and its equivalents." Kahn v. G.M. Corp., 135 F.3d 1472, 1476 (Fed. Cir. 1998). However, in order to get the benefit of an invention which covers equivalents, the applicant must disclose a structure that performs that function. See Med. Instrumentation, 344 F.3d at 1210-11 ("If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid [the price of a means-plus-function claim] but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification." Id. at 1211.). For means-plus-function claims involving data processing performed by a general purpose computer,

the structure must be an outline of an algorithm or its equivalent, teaching how to implement the function. See Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008). One skilled in the art understands the "structure" of computer software through "an outline of an algorithm, a flowchart, or a specific set of instructions or rules." Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1298 (Fed. Cir. 2014); see also id. at 1299 ("Structure may also be provided by describing the claim limitation's operation, such as its input, output, or connections.").

2.   Indefiniteness

"[A] patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." Nautilus, 134 S. Ct. at 2129; see also Interval Licensing LLC v. AOL, Inc., No. 2013-1282, 2014 WL 4435871, at *5 (Fed. Cir. Sept. 10, 2014) ("Although absolute or mathematical precision is not required, it is not enough, as some of the language in our prior cases may have suggested, to identify 'some standard for measuring the scope of the phrase.'").

This requirement is referred to as "definiteness." It embodies the important function of "appris[ing] the public of what is still open to them." Id. (quoting Markman, 517 U.S. at 373) (internal quotation marks omitted). The requirement that a claim be precise enough to afford clear notice of what is claimed thereby eliminates the temptation to later inject ambiguity into the scope of a patent. Id. ("[A]bsent a meaningful definiteness check, . . . patent applicants face powerful

incentives to inject ambiguity into their claims."). A claim which fails to meet the "reasonable certainty" requirement is indefinite, id., and thus not entitled to patent protection, see United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 233 (1942) ("To sustain claims so indefinite as not to give the notice required by the statute would be in direct contravention of the public interest which Congress therein recognized and sought to protect.").

Patents entitle the holder to a presumption of validity of its claims. See 35 U.S.C. § 282 ("A patent shall be presumed valid."). As a result, a party seeking to have a claim declared "indefinite" must present clear and convincing evidence. Tech. Licensing Corp. v. Videotek, Inc., 545 F.3d 1316, 1338 (Fed. Cir. 2008) ("To the extent there are any factual findings upon which a trial court's indefiniteness conclusion depends, they must be proven by the challenger by clear and convincing evidence.").

III.   THE COURT'S CLAIM CONSTRUCTION

   A.   "using a computer to improve a precision ratio when searching a resume database"

The term "using a computer to improve a precision ratio when searching a resume database" appears in the preambles of claims in the '573 and '823 Patents.[8] Monster argues that it is both a claim limitation and indefinite. JobDiva argues that it is neither.

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[8] The application for the '573 Patent was filed in 2003, and the '573 Patent issued on May 4, 2010; the application for the '823 Patent was filed in 2010, and the '823 Patent was issued on October 2, 2012.

The preamble of claim 1 in the '573 Patent states as follows:

> A system for using a computer to improve a precision ratio when searching a resume database, comprising: . . .

(Compl. Ex. A, Col. 36, lines 39-40.)[9]

JobDiva concedes that the term "computer" is a claim limitation, but asserts that the remainder of the preamble, namely "improve a precision ratio when searching a resume database," is not. However, to the extent the Court finds it is a limitation, JobDiva proposes the following construction:

> achieve a precision ratio greater than 5%, where the precision ratio is the number of documents retrieved that satisfy any of the search criteria to the total number of documents retrieved.

(Joint Claim Construction and Prehearing Statement at 6.) Monster takes the position that the entire preamble is a claim limitation, and that it is also indefinite. However, it, too, proposes a construction should the Court find that it is not indefinite:

> Increase[e] the ratio of the number of relevant documents retrieved to the total number of documents retrieved when performing a search of a resume database based on a specified minimum duration of experience for a required skill or experience-related phrase.

(Id.)

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[9] There are two nearly identical preambles at issue: "A system for using a computer to improve a precision ratio when searching a resume database, comprising:" (appearing in Claims 1, 203, 255, and 466 of the '573 Patent and in Claims 1, 110, 133, and 239 of the '823 Patent) and "A method for using a computer to improve a precision ratio when searching a resume database, comprising:" (appearing in Claims 76 and 333 of the '573 Patent and in Claims 44, 175, and 217 of the '823 Patent). The difference between the two versions of the preamble ("system" versus "method") is insignificant.

1.   Claim limitation

Monster argues that the context in which the preamble appears and the

Patent's prosecution history show that the preamble is a claim limitation.

According to Monster, the preamble gives "life and vitality" to the claims, contains

an antecedent basis for terms in the claims, and was relied upon to overcome

patentability rejections.

The Court agrees that the entire preamble is a claim limitation. The Court's

determination in this regard is a mixed one of law and fact. It is based on the

Court's assessment of the evidence—including the competing expert testimony—

regarding how one of ordinary skill in the art would understand the claims, the

Specification, and the prosecution history.

The prosecution history provides the most significant evidence that the

preamble is a claim limitation. The applicant clearly relied on the preamble

language for patentability of independent claims 1, 76, 203, 255, 333, and 466 of the

'573 Patent, and independent claims 1, 44, 110, 133, 175, 217, and 239 of the '823

Patent. "Clear reliance" on the preamble during prosecution results in estoppel and

renders the preamble a claim limitation. See, e.g., Catalina, 289 F.3d at 808;

Cruciferous Sprout Litig., 301 F.3d at 1347.

There is no dispute that during the prosecution of the '573 Patent, the

applicant received a § 101 rejection on the basis that independent claims 1, 76, 255,

and 333 failed the machine-or-transformation test. (Fisher Decl. Ex. 4 at

JD00002970.) See In re Bilski, 545 F.3d 943, 961 (Fed. Cir. 2008) (en banc) ("[T]he

use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility.").[10] There is also no dispute that shortly after receiving this rejection, the applicant amended the preamble to all '573 Patent claims at issue to include the entire phrase "for using a computer to improve a precision ratio when searching." (See Fisher Decl. Ex. 4 at JD00003003.) Nothing in the prosecution history indicates that the patent examiner found that one portion of the amendment (namely, the term "computer") was all that was necessary to overcome the rejection.

In its response to the § 101 rejection, the applicant stated that it amended its independent claims "to identify the apparatus that accomplishes the limitations of the claims." (Id. Ex. 4 at JD00003162 ("Since the limitations of independent claims 1, 76, 255, and 333, as amended, identify the apparatus that accomplishes the limitations of the claims, the presently claimed invention meets the machine-or-transformation test.").)

Shortly after the Markman hearing, Monster deposed the patent attorney who prosecuted the patents in suit, Kenneth Waskiewicz, Esq. JobDiva has designated Waskiewicz as its corporate representative on the topic of prosecution of the same patents. Notably, Waskiewicz refused to state why the preamble was amended; he and JobDiva's attorneys (who represented him at the deposition) asserted that the reason was privileged. (Waskiewicz Dep. 62:06-12, 64:15-65:06,

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[10] The machine-or-transformation test requires that an applicant show that an invention is tied to a particular machine or that it transforms an article. See Bilski, 545 F.3d at 961.

Aug. 22, 2014, ECF No. 145-1.) Because JobDiva did not allow Monster to examine

Waskiewicz on the purpose of the amendment, the Court must ignore counsel's

representation that "the purpose of the amendment was to identify <u>a particular</u>

<u>machine</u>, <u>i.e.</u>, a computer" (JobDiva's Letter at 2, ECF No. 131), that is, that the

"improve a precision ratio" language was unnecessary to overcome the patentability

rejection. Otherwise, counsel would obtain the benefit of an assertion on behalf of

its client when the opposing party is unable to test that assertion—a classic

sword/shield issue. In any event, cloaking the reason in privilege undermines the

credibility of counsel's explanation.

Separately, claim 1 of the '823 Patent[11] was rejected during prosecution

under § 102 as anticipated by prior art, specifically the Kurzius reference. (<u>See</u>

Fisher Decl. Ex. 5 at JD00003903.) In response to the § 102 rejection, the applicant

amended the preamble to the claim to include the phrase "using a computer to

improve a precision ratio." (<u>Id.</u> Ex. 5 at JD00003985.) Waskiewicz admitted that

the applicant made this amendment at least in part to overcome the § 102 rejection:

> Q: So the amendment to the preamble of claim 521 . . . was made in
> part to address the section 102 rejection and perhaps for a variety of
> other reasons; is that correct?
>
> A: The rejection, as I said, the rejection—as I stated and as you stated,
> it was made in part to address the 102 rejections. It may have also
> included other reasons that are just a general practice type of reason
> why you would make a change to an amendment.

(Waskiewicz Dep. 84:06-18.)

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[11] Claim 1 of the '823 Patent was claim 521 in the application. (<u>See</u> Waskiewicz Dep. 82:5-8.)

JobDiva argues that to the extent any language in the preamble constitutes a limitation, it is only the phrase "for using a computer" and not "to improve a precision ratio"—that, in short, the preamble must be examined in pieces and not as a whole. (7/11/14 Tr. at 13, ECF No. 112.) According to JobDiva, addressing the machine-or-transformation test required only reference to the apparatus, and inclusion of the phrase "improve a precision ratio" was therefore entirely unnecessary. This is inconsistent with the testimony of Waskiewicz that the entire preamble had to be considered as a whole, and that no word was more important than any other. (See Waskiewicz Dep. 57:10-58:01.) Waskiewicz also testified that the amendment was the reason that the examiner removed his § 101 rejection of the '573 claims. (Waskiewicz Dep. 77:23-78:06.)

As a matter of law, having relied upon the breadth of the language to overcome patentability issues, JobDiva is estopped from arguing that it is not limiting. See Norian Corp. v. Stryker Corp., 432 F.3d 1356, 1361-62 (Fed. Cir. 2005) ("[T]here is no principle of patent law that the scope of a surrender of subject matter during prosecution is limited to what is absolutely necessary to avoid a prior art reference that was the basis for an examiner's rejection. To the contrary, it frequently happens that patentees surrender more through amendment than may have been absolutely necessary to avoid particular prior art. In such cases, we have held the patentees to the scope of what they ultimately claim, and we have not allowed them to assert that claims should be interpreted as if they had surrendered only what they had to."). In the absence of such reliance, the Court might have had

to determine whether the phrase "to improve a precision ratio" refers solely to the use of a patent, and not to structure, or whether it was necessary to meet the machine-or-transformation test. See Innova/Pure Water, 381 F.3d at 1118 ("Language in a preamble" is not limiting "where it merely recites a purpose or intended use of the invention."). But JobDiva's reliance has rendered such a determination unnecessary.

JobDiva cites Textron Innovations Inc. v. Am. Eurocopter Corp., 498 F. App'x 23 (Fed. Cir. 2012), and STX, LLC v. Brine, Inc., 211 F.3d 588 (Fed. Cir. 2000), as supportive of its position that "to improve a precision ratio" does not constitute a limitation. Neither case is helpful. Both incorporate the proposition that an amendment to a preamble for patentability transforms it into a claim limitation. In Textron, "[t]here was no express statement in the amendment or elsewhere that the term 'replacement' was added to overcome the rejection by limiting the invention to replacement parts only." 498 F. App'x at 29. And in STX, the Federal Circuit found that a preamble phrase was not a claim limitation because the patent examiner continued to object to the claim after the amendment to the preamble, indicating that the amendment was not necessary to secure the patent. See 211 F.3d at 591 ("[T]he patent examiner's rejection of the claim for obviousness even after the preamble language was added, suggests that the phrase was not essential in distinguishing it over the prior art, and was not decisive in securing allowance of the claim during prosecution.").

The prosecution history here presents facts similar to those in Invitrogen Corp. v. Biocrest Mfg., L.P., 327 F.3d 1364 (Fed. Cir. 2003). There, the applicants amended a preamble in response to the patent examiner's rejection of the claims as anticipated by a prior art reference, and then used the amendment to distinguish the reference. Id. at 1370. The Federal Circuit agreed with the district court's conclusion that the preamble amendment was limiting because it was "clearly essential for procuring the patent." Id.

Monster argues that there is no case law support for the separation of certain language in a preamble as limiting from other language as not. This is incorrect. In certain cases, courts have implicitly found a portion of a preamble to be limiting. See, e.g., Interwoven, 2014 WL 490996, at *3. While the Federal Circuit has not directly spoken on the issue, there is no legal principle requiring that a preamble— which, like much language in a patent, can have many parts and subparts—be construed as an undifferentiated whole. Claim construction often requires parsing language into separate pieces.

JobDiva argues that even if the preamble were a limitation with regard to the '573 Patent, it is not with regard to the '823 Patent. This is incorrect. First, as a matter of law, given that this language was added to make the '573 Patent claims patentable, the same amendment in the '823 Patent must also be construed as a limitation. See Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980 (Fed. Cir. 1999). In addition, while JobDiva may now take the position that the preambles to '823 claims "were not amended during prosecution to overcome any rejection of those

claims," (JobDiva's Corrected Opening Claim Construction Brief ("JobDiva Br.") at 4 n.4, ECF No. 44), the preambles were in fact amended following a § 102 rejection, and Waskiewicz testified that the amendment was made at least in part to overcome that rejection. (See Fisher Decl. Ex. 5 at JD00003903, JD00003985; Waskiewicz Dep. 84:06-18.)

Finally, the preamble provides the antecedent basis for the terms "computer" and "resume database" in the claims. This also renders the preamble a claim limitation. Catalina, 289 F.3d at 808 ("[D]ependence on a particular disputed preamble phrase for antecedent basis may limit claim scope."). All aspects of JobDiva's invention are defined with reference to the apparatus, namely the computer. And the references are not to any computer, but rather to a computer used to improve a precision ratio.

The evidence amply demonstrates that the applicant directly relied on the entire amendment to the preamble during prosecution. The evidence also amply demonstrates that the preamble as amended gives life and purpose to the claims, and provides the antecedent basis for terms in the claims. This renders the preamble limiting. See Hearing Components, 600 F.3d at 1366; Catalina, 289 F.3d at 808; NTP, 418 F.3d at 1306. The preamble provides the core focus of the invention—the principle around which all steps revolve: to allow better searching than that allowed by the prior art, specifically as to obtaining resumes with particular skills and experience levels. Without this defining characteristic, the invention is moribund—without life or vitality.

2.   Indefiniteness

Defining "improve a precision ratio when searching a resume database" would be unnecessary if the term were not a claim limitation. However, given that this Court has found that the entire preamble is limiting, the Court must address the next question: is it indefinite? The answer to this question has tremendous importance to JobDiva's ability to enforce the '573 and '823 Patents: if the preamble limits each of the claims, and the preamble is indefinite, then all of the claims which contain the preamble are also indefinite. See Noah Sys., Inc. v. Intuit Inc., 675 F.3d 1302, 1319 (Fed. Cir. 2012) ("[T]he limitation is indefinite. All of the asserted claims contain this limitation; the asserted claims are, therefore, invalid as indefinite.").

For the reasons set forth below, the Court finds that the term "improve a precision ratio when searching a resume database" is indefinite. The Court's finding is based on clear and convincing evidence in the record.

Monster argues that the phrase "to improve a precision ratio" has the following defects: (1) the term "precision ratio" can only be defined with reference to "relevant" results—a subjective term; (2) the term "improve" is without a defined baseline or benchmark; and (3) there is no guidance as to how to test for "precision ratio." Monster argues that JobDiva has not pointed to any intrinsic or extrinsic evidence that sufficiently addresses these issues. The Court agrees.

The Court is guided in this inquiry by the legal standard set forth in Nautilus: whether the claims allow one skilled in the art to determine the scope

29

with "reasonable certainty." Nautilus, 134 S. Ct. at 2129. The Court applies that

standard to the facts as the Court determines them. Put simply, the Court first

must try to construe the term as it would any other; in this regard, it may make

both legal and factual determinations as to how one skilled in the art at the time

would understand the term. See Markman, 517 U.S. at 389. If, in undertaking this

process, the Court cannot construe the term, then the Court must assess whether

there is clear and convincing evidence of indefiniteness. The parties here propose

conflicting expert opinions on whether and how the term may be construed. As with

other terms as to which the parties posit competing interpretations, the Court's

choice between these expert opinions constitutes a factual determination. Based

upon the Court's construction of certain terms, its subsequent determination of

indefiniteness is a matter of law.

The parties agree that, in the context of the invention, "precision ratio" refers

to the number of "relevant" documents retrieved in a search divided by the total

number of documents retrieved. (See Mitzenmacher Decl. ¶ 12, ECF No. 42;

Supplemental Declaration of Michael Mitzenmacher, Ph.D. ("Mitzenmacher Suppl.

Decl.") ¶ 12, ECF No. 73; Carbonell Decl. ¶ 29, ECF No. 62.) Several aspects of that

definition inject ambiguity into the term.

a. Determining relevance

Determining the "precision ratio" for an invention necessarily precedes

assessing "improvement" in such ratio. The parties disagree as to how one is to

determine when a document is "relevant." JobDiva argues that "relevance" is

objectively determined; Monster argues that the determination is subjective (or, if objective, the criteria on which it is based are ambiguous).

Mitzenmacher argues that "[p]eople of ordinary skill in the art have long used the precision ratio as an objective standard to measure the performance of searches. Relevance is not merely defined by a subjective user's preferences." (Mitzenmacher Suppl. Decl. ¶ 9.) These two sentences refer to two different points. The first sentence asserts that precision ratios, once computed, can be objectively compared. The "objectivity" of comparing numbers is apparent; this is not in dispute. The next sentence—which asserts that a determination of relevance for purposes of calculating the numerator of a precision ratio is not subjective—does not necessarily follow. When Mitzenmacher opines that "determining the precision ratio for a particular search is straightforward" (Mitzenmacher Suppl. Decl. ¶ 12), he assumes that the determination of relevance is straightforward, such that the calculation entails no more than simple arithmetic.

Mitzenmacher's position that a relevant document may be objectively identified is based on a definition of a "relevant document" as "one that meets any of the search criteria." (Mitzenmacher Decl. ¶ 13 (emphasis added).) [12] He asserts that "[w]hile a document that includes all of the terms is more relevant than a

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[12] Mitzenmacher testified that a rule would be needed to determine relevance; and that JobDiva specified the rule of relevance as "any." (See 8/1/14 Tr. at 187, ECF No. 135.) Mitzenmacher's reference to a "rule" set forth in the Patent is without support—no such "rule" is set forth in the Patent. He also agreed that to have experience level defined as total or "general" experience in the workplace, for any and all skills, another rule would be necessary. (Id.)

document that includes only one term out of many, they are both relevant."

(Mitzenmacher Suppl. Decl. ¶ 9.)[13]

Mitzenmacher's proposed definition of relevance is overly broad.[14] Suppose a hiring manager seeks candidates with five years of experience in the Java programming language who speak fluent Mandarin, have at least a college degree, and are available to work on the West Coast. According to Mitzenmacher, a resume of someone with two months of Java experience who speaks only Latvian, is self-educated, and can work only in Florida would be "relevant." The resume of a cook who speaks fluent Mandarin but had never programmed in Java (or any other language) would also be "relevant." And so would the resume of an elementary school teacher who speaks only English but is looking for a position in San Francisco. This plainly makes no sense. Nor is it consistent with the invention described in the Specification and in the claims. The invention seeks to improve the accuracy of the resume-searching process, not to broaden it so far beyond reasonable boundaries that a hiring manager is inundated with far more irrelevant resumes than prior art systems likely would have returned.

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[13] Mitzenmacher also testified that he considered there to be degrees of relevance. (Tr. at 188-89.) This, according to Mitzenmacher, allows the broadest definition of relevance—"any" search criteria met—to exist without foreclosing a desire for additional relevance (before, for instance, giving a resume to a CEO). (See Tr. at 173.) Carbonell disagrees.

Carbonell testified credibly (and was cross-examined on his expertise on this particular point) that to calculate a precision ratio one needs a binary definition of relevance and that "degrees of relevance" is a different issue and not pertinent to the establishment of the precision ratio. (Tr. at 196.)

[14] Mitzenmacher's definition also conflicts with the Specification which, when describing problems with precision ratios in the prior art, specifically ties a skill to a duration of experience. (See Compl. Ex. A, Col. 2, lines 4-8 ("To narrow the output to a short list, these systems require a further manual review tallying the maximum possible duration of experience for each required skill or experience-related phrase").)

This Court disagrees with Mitzenmacher's definition of relevance. If a "relevant" resume refers to any resume satisfying at least one search criterion, then the precision ratio for the invention would not be just "improved" at some level over 5%, but would always be 100%. This is inconsistent with the Specification, which discusses improvement over precision ratios at the level of 5% or 1%, but not 100% precision. (See Compl. Ex. A, Col. 2, lines 10-13 ("For certain technical jobs and jobs that require more than minimal experience, the precision ratio can be under 5% and at times even below 1%.").) Assuming prior art references, whether manual or electronic, could at least match a resume to one search term in a query, they, too, would have 100% precision (and no need for a ratio) under this broad definition of relevance. The concept of "improved" relevance would then be meaningless.

JobDiva, through Mitzenmacher, responds that search engines routinely return irrelevant documents. (Mitzenmacher Suppl. Decl. ¶ 10.) For example, searching for "JobDiva" in Google returns a host of (subjectively) irrelevant documents with the words "job" and "diva." (Id.) There is no evidence in the record, however, that the "hits" returned by a general search engine share the same type of "relevance" as the resumes returned with the anticipated improved accuracy of the invention.

Finally, JobDiva points to several cases in which lower courts have not found the terms using the word "relevant" to be indefinite. See British Telecomms. PLC v. Google Inc., No. 11-1249-LPS, 2013 WL 4787350, at *3-4 (D. Del. Sept. 9, 2013); I/P Engine, Inc. v. AOL, Inc., 874 F. Supp. 2d 510, 518-19 (E.D. Va. 2012). The fact

that a term has been used in the context of a different invention and was not found to be indefinite does not resolve the issue before the Court. The Court is required to, and does, review each term at issue in the context of the specific claim in which it appears, the Specification as understood by one of ordinary skill in the art at the time, and the prosecution history. Each of these sources may assist in resolving or revealing ambiguity; prior cases construing unrelated patents may not.

Carbonell disagrees with Mitzenmacher's view that one of ordinary skill in the art at the time understood there to be a single standard definition of relevance. The Court credits his well-supported opinions in this regard.[15] Carbonell opines that "the word 'relevant' has a special meaning in the art of the patents-in-suit, referring to what the person conducting the search would <u>subjectively</u> select if conducting a manual search." (Carbonell Decl. ¶ 32 (emphasis added).) He cites to a number of articles supporting his view that "relevance" is a subjective determination to one skilled in the art. (<u>Id.</u> ¶ 33.) The Court's review of these materials confirms Carbonell's view.

> b.   Benchmark to measure improvement

The public has a right to understand the metes and bounds of the inventions set forth in the '573 and '823 Patents, and to understand what can be done to avoid infringement.

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[15] Moreover, both Carbonell and Mitzenmacher agree that what is "relevant" in fact changes from one query to the next. (Carbonell Decl. ¶ 34 ("Relevance changes from one query to the next."); Mitzenmacher Suppl. Decl. ¶ 12 ("[The precision] ratio, by definition, will not be the same for every search.").)

Whether the preamble is indefinite depends on whether one of ordinary skill in the art would understand with reasonable certainty what the term "improve a precision ratio" means. See Nautilus, 134 S. Ct. at 2129. In this regard, one must understand with reasonable certainty what level of "improvement" and over what is within the scope of the Patents. To measure improvement, one must first define the benchmark or baseline against which the improvement is to be measured. Once the baseline is defined, "improvement" is assessed as a (positive) change over that baseline. Specification of the baseline is important to a potential infringer: if the baseline is specified by the performance of program X, then anyone practicing the invention using a program Y whose performance is inferior to that of X is not infringing.

Mitzenmacher opines that "with regard to the term 'improving,' the JobDiva Patents are concerned with improvements over prior art systems." (Mitzenmacher Decl. ¶ 14.) As an initial matter, Mitzenmacher does not point to a particular prior art system or method against which improvement may be assessed. (Recall that the preamble begins, "A system . . ." or "A method . . ." "using a computer to improve a precision ratio.") If the baseline is a specified system, then one can refer to that system's performance as a benchmark. If the baseline consists of a specified method of resume searching available in the prior art, using specified queries, then one can refer to that method and queries to measure improvement. According to Carbonell, the choice of the system or method matters because precision ratios in the prior art vary widely. (Carbonell Decl. ¶ 20.) Carbonell credibly testified that the word

35

"improve" does not have any special meaning to one skilled in the art. (See id. ¶
19.) Without some additional guidance, a person of ordinary skill in the art would
not have known how to measure "improvement" (id. ¶ 21), and thus could not have
known whether he or she was infringing the Patents.

Mitzenmacher opines that "improving" simply means achieving any precision
ratio greater than 5%, because the Specification refers to precision ratios in the
prior as "under 5% and at time even below 1%." (Mitzenmacher Decl. ¶ 14; see also
Compl. Ex. A, Col. 2, lines 10-13.) However, at the Markman hearing,
Mitzenmacher could not support the 5% or even 1% as a baseline. He testified:

> The way [the applicant] described it in the patent, he didn't say exactly
> 5 percent or exactly 1 percent. We can go back to the wording. It was
> that somewhere as low as 5 percent or even lower, under 1 percent, I
> believe. I don't denote anything interesting by these round numbers.
> He has given sort of an area under which the performance would be,
> and he hasn't suggested that these are specific numbers.

(8/1/14 Tr. at 183, ECF No. 135.) Waskiewicz similarly testified that to "improve a
precision ratio" was not a number and not a definite number. (See Waskiewicz Dep.
44:8-13.)

JobDiva argues that the term "improve" (and similar terms) are not always
indefinite and points to a number of cases in which courts have construed such
terms. See Invitrogen, 424 F.3d at 1383 ("Because this court construed the phrase
'improved competence' . . . such that one skilled in the art would understand the
bounds of the claim, this court detects no unacceptable indefiniteness in that
language in this appeal."); Exxon Research and Eng'g Co. v. U.S., 265 F.3d 1371,
1377 (Fed. Cir. 2001) ("We disagree with the court's conclusion as to the

indefiniteness of the phrase 'to increase substantially.' The specification makes it

reasonably clear that the patentee intended to use the subtraction method in

calculating relative productivity. As noted above, the specification recites that

catalyst productivity can 'more preferably' be increased by as much as 75%."),

abrogated by Nautilus, 134 S. Ct. 2120; Alberta Telecomm. Research Ctr. v. AT & T

Corp., Nos. 09-3883 (PGS), 10-1132 (PGS), 2012 WL 3990540, at *6 (D.N.J. Sept. 10,

2012) ("The Court finds that 'increases and optimizes demand served' is not

indefinite when considered in the greater context of the specification and the

claims."). That "improve" or any term has not been found indefinite as a matter of

law is unsurprising. Each term must be read in the context of the claims and

specification of the patent in which it appears, by one of ordinary skill in the

particular art. The question is whether the metes and bounds of the invention

under consideration, not of some other invention, are defined to a degree of

reasonable certainty.

     c.   Testing for improvement of a precision ratio

  The next issue is how to test improvement in the precision ratio. A testing

method is necessary to enable one practicing in the area of the invention to

determine whether he or she is infringing the patent. In the absence of a testing

method, there is no objective way for one to understand the scope of JobDiva's

exclusive rights. In many contexts, there are standard tests known to people of

ordinary skill in the art. Not so here.

The intrinsic record provides no assistance. This is unsurprising in light of Waskiewicz's testimony. As the individual who prosecuted JobDiva's Patents and wrote the Specification, Waskiewicz testified that he was unaware of any tests that had actually been conducted to generate the 5% and 1% precision ratios stated in the Specification. (Waskiewicz Dep. 35:8-37:8.) In short, there is no evidence in the record that those levels were not simply plucked out of thin air.

The difficulties which inhere without some testing method are evident. Mitzenmacher effectively conceded at the Markman hearing that a precision ratio cannot be calculated on a system-wide basis; it is a well-defined concept only at the query level. (8/1/14 Tr. at 190 ("When you talk about the precision ratio of a system, that is not a well-defined term.").) The experts agree that precision ratios vary from query to query. (Carbonell Decl. ¶ 34 ("Relevance changes from one query to the next."); Mitzenmacher Suppl. Decl. ¶ 12 ("[The precision] ratio, by definition, will not be the same for every search."); see also 8/1/14 Tr. at 176, 178, 179, 184.) Mitzenmacher testified at the Markman hearing that "[p]recision depends on the search that you do. One could, if one wanted, generally artificially create some sort of test. If one wanted to say, look, I can come up with an example that would give 100 percent or 10 percent or whatever number you wanted, one could generally construct inputs to do that." (8/1/14 Tr. at 176.) The lack of such a test, with specified inputs, renders the term "improve a precision ratio" indefinite.

Carbonell describes the importance of testing. He states that "[s]ystematic tests are designed for each specific kind of database, domain of application and

38

specific set of queries involved in the search." (Carbonell Decl. ¶ 21.) Thus, testing

the precision ratio of a resume database is different from testing the precision ratio

of a newspaper archive. (Id.) Carbonell states that "to [his] knowledge, no

systematic test for resume searching was published or publicly known at the time of

the invention." (Id. ¶ 23.) According to Carbonell, the lack of a benchmark against

which to measure improvement and the lack of a specified testing method render it

impossible for one skilled in the art to understand whether he or she had in fact

"improved" the precision ratio of JobDiva's invention. (Id. ¶ 24.)

Carbonell testified at the Markman hearing that when precision ratios are

calculated or tested, it is based on a consensus by experts in the field as to the

proper manner of measurement. (See 8/1/14 Tr. at 193.) The experts (here, human

resource managers or the equivalent) would determine an appropriate standard

using a large number of queries over a large set of different databases. (Id.) He

testified credibly that "someone of ordinary skill in the art would not be able to

establish the precision ratio of a system in a resume search without large-scale

experimentation." (Id. at 195.)

The absence of some way to determine a precision ratio of a resume-search

technology dooms the claims. The law is clear that claim language that would lead

those skilled in the art to perform different tests and get different results is

indefinite. See, e.g., Amgen Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313,

1341 (Fed. Cir. 2003) ("[T]he patent failed to identify a single standard by which the

'difference' could be measured."); Sandvik Intellectual Prop. AB v. Kennametal, Inc.,

No. 10-cv-654, 2012 U.S. Dist. LEXIS 102733, at *66-85 (W.D. Pa. Feb. 16, 2012) (no guidance in the specification as to how to test "(hkl) reflection," nor for which of two ways should be used to measure "standard intensity").

3.   Claim Construction

If this Court were to determine that while the preamble is limiting, it is not indefinite, the Court would turn to its proper construction. JobDiva's proposed construction cannot work because it suffers from the very same infirmities described above with regard to the 5% benchmark. Apart from that, the parties' proposed constructions differ based on JobDiva's view (seen also in the context of other terms) that satisfying "any" search criteria is all that is required for relevance, and Monster's view that relevance must include meeting at least the skill and duration of experience criteria.

Monster's construction is specifically supported by the Specification.[16] (See Compl. Ex. A, Col. 2, lines 4-8 (criticizing the prior art systems for requiring "a further manual review tallying the maximum possible duration of experience for each required skill or experience-related phrase").) Should the term "improve a precision ratio when searching a resume database" require construction, this Court agrees with Monster's proposed construction. The Court's rationale in this regard is similar to that set forth with regard to terms C and D below. The invention is plainly about enabling electronic searches on a candidate's skill and experience

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[16] The Court understands it need not choose only between the parties' competing constructions; it may find another more appropriate.

level for a sought skill. As discussed below, the Specification repeatedly describes

the invention in just those terms.

      B.   <u>"each occurrence of the phrase" / "each occurrence of the . . . phrase"</u>

Claim 1 of the '573 Patent states, in relevant part:

> wherein the term of experience for each said at least one skill or
> experience-related phrase is a summation of the term of experience for
> **each occurrence of the phrase** associated with a different
> experience range;

(Compl. Ex. A, Col. 36, lines 55-59 (emphasis added).)

JobDiva's proposed construction of this term, which appears in all four of its

Patents, is "each instance where the skill or experience-related phrase occurs in the

resume." Monster proposes "each instance where the same phrase appears in the

resume."

According to JobDiva, to the extent that in Monster's construction, "same

phrase" means the same thing as "phrase," it is redundant; and to the extent it is

not redundant, Monster is attempting to rewrite the claim. At the <u>Markman</u>

hearing, the parties agreed that there essentially is no difference between the

parties' constructions and took this claim off the table until further notice to the

Court. (<u>See</u> 7/11/14 Tr. at 72-73.)

      C.   <u>"required term of experience"</u>

Claim 1 of the '573 Patent states, in relevant part:

> send a database query to the resume database, the database query
> including a job description that includes at least one job requirement,
> each said at least one job requirement including a required skill or
> experience-related phrase, and a **required term of experience**;

(Compl. Ex. A, Col. 37, lines 2-6 (emphasis added).)

Monster proposes the phrase be construed as the "specified minimum duration of experience for a required skill or experience-related phrase."[17]

JobDiva argues that the term "required term of experience" as used in this portion of the claim, should be given its plain and ordinary meaning. (See Mitzenmacher Decl. ¶ 20.) If the Court determines that construction is needed, JobDiva's proposed construction is "a minimum duration experience." JobDiva's position is that the term "required term of experience" need not pertain to a required skill; rather, "it can be more general, for example the total duration of experience in the workforce."[18] (JobDiva's Reply Claim Construction Brief for the JobDiva Patents ("JobDiva Reply") at 3, ECF No. 72.)

The Court agrees with Monster's proposal based on the Court's determination of how one of ordinary skill in the art at the time would construe the claim language in light of the Specification. The parties' experts disagree as to how one of ordinary skill in the art at the time would construe this term; the Court's determination is based, in part, on a factual finding that one expert's view should be credited over another's.

JobDiva's position lacks real support in the intrinsic evidence. The invention is concerned with enabling prospective employers to search for candidates with particular skills at defined experience levels. This feature is what distinguishes

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[17] Monster's proposed construction of the term as it appears in the '221 Patent is "specified minimum duration of experience."

[18] JobDiva did concede at the Markman hearing that a query requires both experiential and temporal components. (See 7/11/14 Tr. at 61-62.)

JobDiva's invention from the prior art systems and methods, which "require[d] a further manual review tallying the maximum possible duration of experience for each required skill or experience-related phrase." (Compl. Ex. A, Col. 2, lines 4-8.) The Specification criticizes this defect of the prior art, and then articulates a "need" for a system that can "accommodate requiring a candidate to possess the qualification or requirement for a specified minimum period of time" (id. Ex. A, Col. 3, lines 5-7). According to the Specification, JobDiva's invention "addresses this need." (Id. Ex. A, Col. 3, line 7.)

The Specification provides numerous examples of the meaning of the term "a required term of experience," such as "a minimum two years of experience in the Java programming language." (Id. Ex. A, Col. 27, lines 36-37.) Each time the Specification mentions a minimum duration of experience, it makes clear that the minimum duration of experience is for a required skill or experience-related phrase. (See, e.g., id.; id. Ex. A, Col. 8, lines 17-20 ("Each requirement includes at least one required skill or experience-related phrase and a required minimum duration of experience associated with the skill or experience-related phrase." (emphasis added)); id. Ex. A, Col. 11, lines 4-8; id. Ex. A, Col. 11, lines 59-65; id. Ex. A, Col. 13, lines 18-24; id. Ex. A, Col. 24, lines 41-46; id. Ex. A, Col. 26, lines 20-24; id. Ex. A, Col. 27, lines 30-33; id. Ex. A, Col. 28, lines 35-40; id. Ex. A, Col. 29, lines 18-24; see also Carbonell Decl. ¶ 45.)

To suggest that a "minimum duration of experience" may refer to total experience in the workforce—and not be tied to any particular skill or experience-

related phrase—guts the point of the invention. The Specification does not describe

searches based on total workforce experience, and there is no support in the

intrinsic evidence that the invention seeks to improve searches on what essentially

amounts to a proxy for age. The invention was created to increase the speed and

accuracy of searches for candidates with experience in specified skills, not to enable

searches based on skill and age. If a hiring manager seeks to hire a candidate with

a minimum of five years of experience in the Java programming language, he

should not, if the invention is working properly, receive the resume of a candidate

who has worked as a fisherman for forty years and decided to try out computer

programming. It also does not make much sense to use the word "minimum" if the

quantity sought is "total."

As support for its position, JobDiva points to several places in the

Specification.[19] The first describes the "resume generator program." (See Compl.

Ex. A, Cols. 20-21, lines 64-45.) JobDiva points out that the resume generator

program produces a resume summary that includes the total duration of a

candidate's work experience, and that it derives that total duration from the output

of the resume parser program. (See id. Ex. A, Col. 21, lines 11-13, 25-29.)

According to JobDiva, this means that a parsed resume either contains a field with

the total workforce experience, or that information can be derived from the parsed

resume—in either case the total work experience can be searched upon. (See

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[19] JobDiva refers to these portions repeatedly to support its position on various claim terms. The
Court refers back to this portion of the Opinion when that occurs.

Mitzenmacher Suppl. Decl. ¶ 17.) This argument is inapposite. The resume

generator program is an entirely separate aspect of the invention, unrelated to

parsing the resume or storing its contents. That a separate, unrelated program is

able to "derive" the total duration of a candidate's work experience for its own

purposes does not mean that the resume database is structured to use as one of its

core query fields a candidate's total duration of experience.[20]

JobDiva's second reference is to the part of the Specification that describes

Figure 9. JobDiva argues that this part of the Specification describes an

embodiment in which a search can be performed only on a required skill (without

specifying any term of experience). The Specification states: "Recruiter 120a enters

a list of all the skill or experience-related phrases sought in candidate 110a (step

905)." (Compl. Ex. A, Col. 30, lines 31-32.) The description continues:

> Furthermore, recruiter 120(a) **may** provide a required minimum
> length of experience for any of the skill or experience-related phrases
> that comprise the search, whether the phrases are those originally
> required or their alternatives as stated by recruiter 120(a).

 (Id. Ex. A, Col. 31, lines 3-7 (emphasis added).) JobDiva argues that the word

"may" indicates that including a required term of experience in a search query is

optional.

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[20] Moreover, if the invention were such that the database could be queried, at the prospective employer's option, for either the total duration of work experience or the term of experience in a particular skill, then it must allow the prospective employer to indicate his choice in some way in the query. But the claims and the Specification make no mention of such a feature; there is no suggestion, for example, that a query can include a variable indicating whether the prospective employer wants to search for a candidate's total duration of experience or only experience in a particular skill.

At the outset, this interpretation is inconsistent with JobDiva's

acknowledgement at the Markman hearing that the asserted claims require

searching a resume database using a required skill and a required term of

experience (not just one or the other). (See 7/11/14 Tr. at 61-62.) More importantly,

when read in the context of Figure 9, the passage on which JobDiva relies actually

undercuts JobDiva's position—it describes a search based on skills and years of

experience for those skills. "[S]tep 905" of Figure 9 explicitly associates skills and

experience-related phrases with durations of experience for such skills or

experience-related phrases (not for total workforce experience). The step instructs:

"receive a search including skills or experience related phrases and a duration of

experience for each" (emphasis added). JobDiva's reliance on the word "may" in the

Specification is misplaced: in context, "may" means that the "required minimum

length of experience" may be for either the "originally required" skills or their

stated "alternatives."[21] In any event, even if "may" is interpreted to mean that the

recruiter has the option to (but does not have to) provide a required minimum

length of experience, it is not clear how that advances JobDiva's argument that

such a required minimum length of experience need not be linked to a particular

skill or experience-related phrase.

JobDiva also refers to a passage in the section in the Specification entitled

"Features and Advantages." (Compl. Ex. A, Col. 5, lines 14-18.) The passage states:

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[21] The word "may" may also be used simply because the Specification is describing what the
invention enables recruiters to do.

> The resume management and recruitment workflow system **allows** a hiring manager or recruiting representative to search a resume database for a candidate having a specific skill or experience-related phrase at a required minimum duration of experience.

(Id. (emphasis added).) JobDiva asserts that the word "allows" suggests optionality—that a hiring manager is permitted but not required to search for a skill-plus-required experience level. In the context of the claims and the Specification, "allows" means no more than "enables." It is suggestive of what the invention enables, versus, for instance, prior art.

The prosecution history also undercuts JobDiva's construction. In distinguishing the '823 claims from the Kurzius reference following a § 102 rejection, the applicant made clear that the term of experience was for a skill or experience-related phrase:

> In the Kurzius system, . . . the candidate may use a . . . form to specify a level of expertise associated with a particular skill keyword. In contrast to Kurzius, independent claims . . . as amended, further recite that **each skill or experience-related phrase** has "an experience range determined by examining a use of the skill or experience-related phrase in the resume, and a term of experience based on the experience range" where **the parsed resume includes "the term of experience for each said at least one skill or experience-related phrase" located in the resume**. In further contrast to Kurzius, independent claims . . . as amended, further recite that the term of experience for each skill or experience-related phrase is "a summation of the term of experience, or a portion of the term of experience, for each occurrence of the phrase associated with a different experience range."

(Fisher Decl. Ex. 5 at JD00003978 (emphasis added).)

JobDiva argues that, in making this prosecution-history argument, Monster conflates resume <u>parsing</u> (in which a term of experience is computed for each skill

or experience-related phrase) and resume <u>searching</u>. JobDiva acknowledges that in order to search, a resume first must be broken into its constituent elements—a process generally referred to as "parsing." (<u>See</u> 7/11/14 Tr. at 12 ("You do parse. . . . Then you can run searches.").) However, according to JobDiva, "[s]imply because a resume may be parsed to enable searching by a required term of experience for a required skill, it does not mean that the claims require such searching." (JobDiva Reply at 2.) This position is untenable. The point of parsing is to enable searching on that which has been parsed, and one cannot search for information that has not been parsed and stored. While it may be correct that not all information parsed must be searched, the one is nonetheless required for the other. As Monster's counsel argued at the <u>Markman</u> hearing, "You have to search the database that you have created." (7/11/14 Tr. at 79.)

Throughout the Specification and the claims, the invention is described in sequential steps: (1) receiving a resume, (2) parsing into skills, (3) computing the number of years the candidate has <u>in each skill</u>, (3) storing that information in a database, and (4) allowing potential employers to search for candidates meeting job requirements for skills at particular experience levels. The claims repeatedly link duration to specific skills or experience-related phrases. Consider Claim 1 of the '573 Patent for example:

> compute a term of experience **for each said at least one skill or experience-related phrase** . . .
>
> wherein the term of experience **for each said at least one skill or experience-related phrase** is a summation of the term of experience for each occurrence of the phrase . . .

[and]

> create a parsed resume . . . including . . . the term of experience **computed for each said at least one skill or experience-related phrase**, and a relationship **between the term of experience and each said at least one skill or experience-related phrase** . . .

(Compl. Ex. A, Col. 36, lines 39-67 (emphases added).) It is clear that what is parsed and stored, and therefore what can be searched, are terms of experience for particular skills, not any overall workforce experience. Indeed, in response to a question by the Court at the <u>Markman</u> hearing as to whether the claims recite parsing or storing candidates' total years of experience in the workplace, JobDiva at first conceded that they do not.[22] (7/11/14 Tr. at 70 ("I don't have a cite for you right now.").)

JobDiva also argues that whatever the construction might be for the '573 Patent, that construction does not apply to the '823 Patent because different patents use this term differently. In the '823 Patent, the phrase "required term of experience" appears only in dependent, and not independent claims. According to JobDiva, Monster's construction seeks to import this phrase into the independent claims. This position is incorrect. The Specification is shared by these two patents, and nothing in the claim language suggests a different meaning for this term in one patent versus the other.

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[22] JobDiva's counsel later pointed to the fact that the "resume generator" derives "total duration of experience." (7/11/14 Tr. at 81-82). As discussed above, this argument does not advance JobDiva's position.

In addition, JobDiva points to the fact that the '221 Patent uses the connection "for" rather than "and": "said at least one job requirement comprising a required skill or experience-related phrase and a required term of experience for the required skill or experience-related phrase." (Compl. Ex. B, Col. 24, lines 6-9 (emphasis added).) According to JobDiva, the use of the word "for" in the '221 Patent reflects an affirmative intent to link "required term of experience" with "skill or experience-related phrase," suggesting that the other Patents are not so limited. The Court disagrees. As used in the Patents, the words "for" and "and" both act as grammatical connections between the skill and the term of experience.

The Court credits Carbonell's reading of the claims the Specification from the perspective of one skilled in the art. Carbonell states that Monster's proposed construction is supported by the context of the surrounding claim language. (Carbonell Decl. ¶ 48.) He then recites the claim language and the near-by connections between "required term of experience" and a skill or experience-related phrase. (See id.) Carbonell also states that the common specification "consistently clarifies that the minimum duration of experience is for a required skill or experience-related phrase." (Id. ¶ 45; see also id. ¶ 46-47.) He explains how the invention works from the perspective of one skilled in the art: if a resume reflects that a candidate worked with the Java programming language for a total of three years, JobDiva's system would create a parsed resume having (1) something representing the Java programming language as a skill or experience-related phrase, (2) information corresponding to three years of experience, and (3) a way to

reconstruct that the skill and the experience duration are related to one another.

(Id. ¶ 51.) JobDiva's construction, according to which "required term of experience"

is untethered to any particular skill, such as Java programming, does not make

sense to Carbonell because it "creat[es] a mismatch between the types of

information stored in the resume database and what one tries to search for in that

database." (Id.) The Court agrees.

Accordingly, the Court agrees with Monster's proposed construction of

"required term of experience." It would make no sense to have a generalized

reference to a "term of experience" without specifying to what that term relates. It

is a term of experience of "what"? It cannot be that the term of experience could

refer to something outside of the claim and undefined. The answer is at hand—

indeed it is peppered repeatedly throughout the patent: it is a term of experience in

a skill or experience-related phrase.

D.   Satisfying the Job Description or Search Criteria

Claim 1 of the '573 Patent states, in relevant part:

> receive a result set in response to the database query, wherein the result set includes the resume **when the parsed resume satisfies the job description**.

(Compl. Ex. A, Col. 37, lines 7-9 (emphasis added).)

Claim 1 of the '823 Patent states, in relevant part:

> wherein each matching resume is one of said at least one resume having the **parsed resume** associated with the matching resume **satisfying the search criteria**.

(Id. Ex. C, Col. 37, lines 1-3 (emphases added).)

Claim 1 of the '221 Patent states, in relevant part:

> a second display region including a **matching resume that satisfies the job description**.

(Id. Ex. B, Col. 24, lines 10-11 (emphasis added).)

Claim 1 of the '715 Patent states, in relevant part:

> wherein said at least one skill or experience-related phrase includes said at least one required **skill or experience-related phrase**, or at least one implying phrase for said at least one required skill or experience-related phrase, **that satisfies the job description**,

(Id. Ex. D, Col. 37, lines 9-14 (emphases added).)

The parties differ as to the construction of the bolded portions. Because their positions turn on common issues, the Court deals with them as a group.

JobDiva asserts that no construction is necessary for these terms. If the Court determines that construction is necessary, JobDiva proposes the following:

First term: "when the parsed resume meets **any** of the job requirements in the job description"

Second term: "parsed resume that meets **any** of the search criteria"

Third term: "a resume that meets **any** of the job requirements"

Fourth term: "skill or experience-related phrase includes said at least one required skill or experience-related phrase, or at least one implying phrase for said at least one required skill or experience-related phrase, **that meets** the job description"

Monster proposes the following constructions:

First term: "when (1) at least one skill or experience-related phrase in the parsed resume matches the required skill or experience-related phrase of the job description; and (2) the term of experience for the skill or experience-

52

related phrase that matches the required skill or experience-related phrase satisfies a specified minimum duration of experience"[23]

Second term: "parsed resume that includes a specified minimum duration of experience for a required skill or experience-related phrase"

Third term: "a resume for which: (1) at least one 'skill or experience-related phrase' in the resume matches a 'searchable phrase' of the job description; and wherein (2) the 'term of experience' for the 'skill or experience-related phrase' that matches the 'required skill or experience-related phrase' satisfies the 'required term of experience' [i.e. the specified minimum duration of experience]"

Fourth term: "skill or experience-related phrase includes said at least one required skill or experience-related phrase, or at least one implying phrase for said at least one required skill or experience-related phrase, accompanied by a term of experience for it that meets the job description" (emphasis added)[24]

The heart of the dispute between the parties is whether a job description (or search criteria) is "satisfied" by a resume meeting any of the job requirements, or whether satisfaction narrower than that—and occurs when there is not only a skill match, but also a match in required minimum duration of experience. The Court's example above bears repeating here. Imagine a job description states that a company seeks to hire candidates with five years of experience in Java who are college educated, speak fluent Mandarin, and are available to work on the West Coast. Does a resume of someone with two months of Java experience who speaks

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[23] This is Monster's proposed construction of the term as it appears in claims 1, 76, and 203 of the '573 Patent. Monster's proposed construction of the term as it appears in claims 255, 333, and 466 of the '573 patent is as follows: "when (1) at least one searchable phrase in the parsed resume matches the required skill or experience-related phrase of the job description; and (2) the term of experience for the searchable phrase that matches the required skill or experience-related phrase satisfies a specified minimum duration of experience."

[24] This proposed construction appears in Monster's Response Claim Construction Brief ("Monster Resp. Br."). (Monster Resp. Br. at 10, ECF No. 57.)

only Latvian, is self-educated, and can only work in Florida "satisfy" this job

description? Surely not. This example shows that "satisfying" a job description

requires more than matching any one aspect of the job description.

JobDiva argues that nothing in the claim language indicates a special

definition of the phrase "satisfies the job description" and that, in particular, there

is no requirement that "satisfy" as used in the asserted claims requires any

matching of a required duration of experience. To support its position, JobDiva

points to the following passage in the Specification:

> The candidates in this short list will have the required skill or
> experience-related phrases at **possibly** the required duration of
> experience as long as the resume contains job narratives that contain
> the skill or experience-related phrase, and the duration of various jobs
> held by the candidate.

(Compl. Ex. A, Col. 5, lines 21-24 (emphasis added).) JobDiva seizes on the word

"possibly" to argue that a successful resume—one that satisfies the job description—

might or might not reflect any particular duration of experience for a skill. This

misinterprets the plain meaning of "possibly" in the context of the intrinsic

evidence. The word "possibly" merely highlights the distinction between the

contents of a resume and the actual experience of a job candidate in a particular

skill. The resume parser calculates a projected—not precise—duration of

experience for each skill based on the date ranges provided in the resume. For

example, Candidate X who worked as a computer programmer for two years might

have used Java during the first year and C++ during the second. Such a candidate

would have only one year of actual experience with each language, but the parser

would not know that, and would record two years' experience for both languages.

Thus, when a prospective employer seeking candidates with at least two years of

experience in Java runs a query, Candidate X's resume would be returned as

"possibly" satisfying the job description; upon further review or inquiry, the

employer would see that it does not in fact. That is what "possibly" means—it does

not mean more, and it should not be read to eviscerate the point of the invention.

(See id. Ex. A, Col. 5, lines 8-13 (referring to the term of experience for a skill or

experience-related phrase as "the maximum possible duration of experience").)

JobDiva also argues that Monster's construction contradicts claim 1 of the

'715 Patent, which states, in relevant part:

> wherein said at least one skill or experience-related phrase includes
> said at least one required skill or experience-related phrase, or at least
> one implying phrase for said at least one required skill or experience-
> related phrase, that satisfies the job description,

(Compl. Ex. D, Col. 37, lines 9-14.) JobDiva argues that this language expressly

indicates that a skill match alone is enough to "satisfy" a job description that

requires a skill and a term of experience. The Court disagrees. The claim explicitly

defines a "job description" as comprising "at least one job requirement including a

required skill or experience-related phrase and a required term of experience." (Id.

Ex. D, Col. 36, lines 45-47.) Thus, to satisfy even a single requirement of a job

description requires a match in both skill or experience-related phrase and the

associated required term of experience.

JobDiva also argues that Monster's proposed construction reads out two embodiments: (1) an embodiment that, according to JobDiva, allows for searching based on total workforce experience, referring (once again) to the resume generator program, which "produces a resume summary that includes the total duration of work experience of candidate 110a" (Compl. Ex. A, Col. 21, lines 11-13), and (2) an embodiment in which, according to JobDiva, a search can be performed on only a required skill (searching by a term of experience is optional), referring to the Specification's description of Figure 9 (id. Ex. A, Col. 31, lines 3-7). For the reasons described with respect to term C above, these arguments are inapposite. There is no necessary connection between the resume generator program and a search return generated after a query of an already parsed resume. And the word "may," when read in conjunction with Figure 9, does not suggest that including a term of experience in a search query is optional.

Monster supports its position with intrinsic evidence. Monster points out that in each of the variations of the wording, there is a consistent use of a singular term: satisfying "the job description" (claims 1 of the '573, '221, and '715 Patents), and "satisfying the search criteria" (claim 1 of the '823 Patent.) According to Monster, the phrase "job description" is shorthand for a set of requirements consisting of a required skill or experience-related phrase and a specified minimum duration of experience for such skill or experience-related phrase. The use of the singular article "the" indicates a specific job description—that is, the one entered by the hiring manager. Accordingly, whatever criteria the hiring manager has entered

constitute "the" job description—and that job description is what the parsed resume must satisfy. (There is nothing which suggests that the resume generator program has anything to do with establishing the criteria in the job description.)

In addition, the creation of a job description is described in the Specification itself. That description is clear that the hiring manager must enter at least one skill or experience-related phrase <u>and</u> a minimum duration of experience:

> Recruiter 120a determines a set of requirements and searches resume management and recruitment workflow system 140 for any resume **that matches the set of requirements**. **Each requirement includes at least one required skill or experience-related phrase and a required minimum duration of experience associated with the skill or experience-related phrase.** The phrase 'matches the set of requirements' indicates that the resume includes each experience-related phrase in the set of requirements and that the maximum possible duration of experience for each experience-related phrase exceeds the required minimum duration of experience defined by the hiring manager 130a.

(Compl. Ex. A, Col. 8, lines 14-25 (emphasis added).)   Monster also points to the following portion of the '221 Specification:

> To satisfy the job description, the matching resume includes the required skill or experience-related phrase for each job requirement, **and** the term of experience for the required skill or experience-related phrase in the resume is greater than or equal to the required term of experience.

(Compl. Ex. B, Col. 4, lines 26-31 (emphasis added).)

The Court agrees with Monster's proposed construction. To satisfy that job description requires having a match in both a specified skill or experience-related phrase <u>and</u> the required term of experience for such skill or experience-related phrase.

E.   "means for receiving a result set in response to the database query"

Claim 466 of the '573 Patent states, in relevant part:

> **means for receiving a result set in response to the database query**, wherein the result set includes the resume when the parsed resume satisfies the job description.

(Compl. Ex. A, Col. 78, lines 44-46 (emphasis added).)

Both parties agree that this is a means-plus-function claim, and both agree that the function is "receiving a result set in response to the database query." However, the parties disagree as to the means or structure required to achieve that function.

JobDiva asserts that the "means for receiving a result set in response to the database query" should be construed as having the structure of "a computer programmed with the portion of user interface program 310 or resume searching program 315 that receives the results of the resume database search as described in the Specification at 12:55-13:12 and 18:48-20:63." (Mitzenmacher Decl. ¶ 37.) According to Mitzenmacher, "[t]he specification discloses that for any search query run by the resume searching program, the search results are submitted back to the resume searching program and then displayed on the user interface." (Id.) Mitzenmacher opines that "the form of the query is irrelevant to the means by which that a result set is received in response to that query." (Id. ¶ 38.)

Monster's proposed structure is "an algorithm that requires receiving a result set in response to a query based on a specified minimum duration of experience for a required skill or experience-related phrase."

58

The essential dispute between the parties is, then, yet again, whether a "specified minimum duration of experience" is an implicit part of the term. It is. The "means" here is a structure; the issue is whether a structure may be designed without particular reference to the form of query. The Court cannot determine this structural issue in the abstract—it must, and does, refer to the experts whom the parties have proffered. The experts differ as to this technical issue. The Court agrees with Carbonell, whom the Court found credible and well informed. Carbonell was quite clear that the form of query sent (at least skill-plus-experience level) informs the results received, and that, as a structural matter, the algorithm must anticipate the form of the result.

JobDiva argues that there is no basis in the language of the claims or the Specification to require a particular type of response from the database, namely a result set with resumes that contain a required minimum duration of experience. Mitzenmacher states, "[T]here is nothing in the claim language that requires a specific form of query, and the form of the query is irrelevant to the means by which . . . a result set is received in response to that query." (Mitzenmacher Decl. ¶ 38.) According to JobDiva, the structure is sufficiently set out in the user interface program 310 and the resume-searching program in 315. JobDiva also points to embodiments which it argues do not require a term of experience to be searched (Compl. Ex. A, Col. 30, lines 31-37, 50-54; id. Ex. A, Col. 31, lines 3-5) as support. JobDiva's position incorrectly reads the Patent. The Patent anticipates queries of a

specific type (skill-plus-experience level) and results which satisfy those queries—that is, candidates with the skills-plus-experience level.

Carbonell, from the perspective of one of ordinary skill in the art at the time, states credibly that "at the time of the invention, [one skilled in the art] would have known that storing information in a database means that the information would be stored in one or more 'tables.'" (Carbonell Decl. ¶ 57.) And there are many possible structures for a table storing resume information. (Id. ¶ 57.) Carbonell opines that Monster's construction identifies the algorithm's requirement. (Id. ¶ 62.) Put another way, the algorithm is not just any algorithm—it must be designed to receive the type of result set being returned. According to Carbonell, the types of information returned certainly impact the structure. A structure needs to be properly designed to account for expected fields. He notes also that a portion of the Specification to which JobDiva refers in fact supports his opinion: "[r]esume 115a meets the input criteria if the rounded-up required duration of each required experience-related phrase or its stated alternative in the job criteria is less than the maximum-total-duration tag of the experience-related phrase or its alternative in resume 115a." (Id. (emphases added).) That is, the input criteria include a skill-plus-experience level; and returned results include skill-plus-maximum-total-duration tag. Thus, the expected query and expected form of result contain expected types of content.

Carbonell states that a structure corresponding with the "means for receiving a result set in response to the database query" includes an "algorithm that requires

receiving a result set in response to a query based on a specified minimum duration

of experience for a required skill or experience-related phrase." (Id.) Carbonell,

who speaks from the perspective of one skilled in the art, and whom the Court

found credible and reliable, states that "this algorithm would be <u>necessary</u> to

perform the function of 'receiving a result set in response to the database query' in

the context of the claims in which this term appears." (Id.)

The Court's determination is, therefore, that the term should be construed as

Monster proposes.[25] This determination is, as set forth above, necessarily a mixed

question of law and fact.

F.   "means for sending a database query to the resume database"

Claim 466 of the '573 Patent states, in relevant part:

> **means for sending a database query to the resume database**,
> the database query including a job description that includes at least
> one job requirement.

(Compl. Ex. A, Col. 78, lines 38-40 (emphasis added).)

Both parties agree that claim 466 is also a means-plus-function claim. They

agree that the function is "sending a database query to the resume database."

However, as with term E, they differ as to structure needed to accomplish that

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[25] JobDiva argues that inclusion of the duration requirement by Monster effectively rewrites the claim to add the following language at the end: "and the term of experience for the skill or experience-related phrase that matches the required skill or experience-related phrase satisfies a specified minimum duration of experience." This is incorrect. The only reason Monster proposes the wording is that the parties disagree as to whether the concepts are already embedded in the claim. The Court finds that they are implicitly embedded. However, to eliminate doubt, this additional wording makes clear that which is already implied.

function and whether the structure must be based on a specified minimum duration of experience for a particular skill.

The arguments here are variations on those already discussed in term E. JobDiva asserts that this phrase should be construed as having a structure defined as "a computer programmed with the portion of resume searching program 315 that queries the database as described in the Specification at 18:48-20:63." Mitzenmacher states that "the resume searching program receives as input the search criteria that was entered into the data entry program." (Mitzenmacher Decl. ¶ 44.)

JobDiva again points to passages in the Specification that allegedly contain embodiments do not require that a term of experience be searched. Specifically, JobDiva points to the Specification at 30:31-37; 30:50-54; and 31:3-5. (Compl. Ex. A, Col. 30, lines 31-37, 50-54; id. Ex. A, Col. 31, lines 3-5.) The first two passages refer to a search by a recruiter based on a skill or experience-related phrase; the third passage begins "furthermore" and states that a recruiter "may" provide a required minimum length of experience for any skill or experience-related phrases (Compl. Ex. A, Col. 31, lines 3-5). JobDiva's position here is consistent with its position elsewhere: that the query need not have both a skill and an experience level for that skill; it can have the former without the latter. For all of the reasons already set forth above, and as additionally discussed below, this is unduly broad and ultimately incorrect.

Similar to its position with respect to term E, Monster proposes the structure as "<u>an algorithm</u> that requires a query based on a specified minimum duration of experience for a required skill or experience-related phrase."

Monster argues that—as with receiving the query results—the algorithm for the search must account for queries necessarily based on a minimum duration of experience for each skill. Carbonell, from the perspective of one skilled in the art at the time, describes the algorithm requirement. (Carbonell Decl. ¶ 61.) He also refers to a portion of the Specification to which JobDiva cites— namely the statement "[r]esume 115a meets the input criteria if the rounded-up required duration of each required experience-related phrase or its stated alternative in the job criteria is less than the maximum-duration tag of the experience-related phrase or its alternative in the resume 115a"—as supportive of Monster's construction. (<u>Id.</u>) Similar to his statement with regard to term E, he states that this algorithm would be necessary to perform the required function, because the claims require that the "database" store a term of experience for a skill or experience-related phrase. (<u>Id.</u>)

Here, again, the Court is choosing between two experts who opine differently as to how one of ordinary skill in the art would understand this term. Carbonell's explanation was credible, consistent, and supported by the Specification. Mitzenmacher's was not. The Court agrees with Monster's proposed construction and its determination is a mixed question of law and fact.

G.   "graphical user interface, comprising a first display region . . .; and a second display region"

Claim 1 of the '221 Patent states, in relevant part:

a graphical user interface, comprising:

a first display region including a job description that includes at least one job requirement, each said at least one job requirement comprising a required skill or experience-related phrase and a required term of experience for the required skill or experience-related phrase; **and a second display region** including a matching resume that satisfies the job description.

(Compl. Ex. B, Col. 24, lines 4-11 (emphasis added).)

JobDiva proposes the following construction: "graphical user interface comprising a first region . . . and a second region displayed on a screen at the same time."

According to JobDiva, its construction is consistent with the Specification which refers to a split-screen view: "a split-screen view of a single frame comprising multiple portions. All portions are contained in a single frame that has common windowing characteristics." (Id. Ex. B, Col. 23, lines 22-27.) Mitzenmacher states that the '221 Specification does not disclose an embodiment "where only one region is displayed at a time" (Mitzenmacher Decl. ¶ 65), and that when a screen is available but hidden, it is not "displaying information" (Mitzenmacher Suppl. Decl. ¶ 56). JobDiva argues that Monster's proposal does not meet each of the claim terms—because not all of the required information would be displayed at the same time.

In contrast, Monster proposes the following construction: "graphical user interface, comprising a first display region . . .; and a second display region, which may but need not be displayed simultaneously with said first display region."

The difference between the two proposed constructions relates to whether the two graphical interface regions must be displayed at the same time—that is, whether a split-screen view in a single frame is required (as opposed to simply allowed). JobDiva says "yes" and Monster says "no."

The Court agrees with JobDiva's proposed construction. That construction comports with the plain reading of the claims and Specification. As an initial matter, the term "region" suggests area; the reference to one region and then another region suggests two areas on a single monitor. This is consistent with a split-screen view and simultaneous display and inconsistent with Monster's construction. Monster's construction reads out the word "region" altogether, focusing solely on display.

> H.   "personal and business-related characteristics that the candidate believes to be relevant to a prospective employer."

Claim 1 of the '221 Patent states, in relevant part:

> wherein each resume conveys **personal and business-related characteristics that the candidate believes to be relevant to the prospective employer,**

(Compl. Ex. A, Col. 24, lines 25-27.)

JobDiva asserts that no construction is necessary, but that if the Court disagrees, proposes "personal and professional information that the candidate **included** in his or her resume" (emphasis added). Mitzenmacher states that this

term would be readily understood by one of ordinary skill in the art. (Mitzenmacher

Decl. ¶ 68.) Mitzenmacher's view is, however, without experiential basis. The skills

of one of ordinary skill in the art at the time, described by Mitzenmacher (id. ¶ 9),

do not include any particular skill in human resources or resume analysis—and

there is nothing about this phrase that is directly related to "computer science" or

"computer systems and data processing." (See id.) The Court therefore gives no

weight to Mitzenmacher's view on this term.

     According to JobDiva's brief, if a candidate places information on his or her

resume, the candidate is expressing a belief that a potential employer may find such

information relevant. (JobDiva Br. at 22-23.) According to JobDiva, this is

supported by the Specification which states, "The resume is a mechanism to convey

personal and business-related characteristics that the candidate believes to be

relevant to a prospective employer." (Compl. Ex. B, Col. 1, lines 39-41.) Notably,

directly after the disputed portion of the claim is a portion referencing the

requirement that each resume must include at least one skill or experience-related

phrase and an experience range for such. (See id. Ex. B, Col. 24, lines 28-31.)

     Monster asserts that this phrase is indefinite and no construction is possible.

According to Monster, the phrase is material because it was added during

prosecution of a parent application to overcome a prior art reference. (See Monster

Resp. Br. at 25; Fisher Decl. Ex. B at MONJD082452-56.) The phrase is used twice

in the Specification for the '221 Patent: "wherein each resume summarizes a

candidate's career and qualifications" in 24:23-24, contrasts with "wherein each

66

resume conveys personal and business-related characteristics that the candidate believes to be relevant to a prospective employer." Monster argues that there must be a difference between these two clauses.

In addition, Monster argues that it is impossible for a third party to understand the scope of the patent's claims when he or she is required to refer to the subjective belief of a candidate.

The Court disagrees. The invention is not concerned with the particular content of any resume beyond certain broad fields of information that the method or system can then parse. Its inclusion of at least one skill or experience-related phrase and duration of experience captures the essential required information; additional information is not required. Whether a candidate includes on his or her resume that he or she enjoys cooking or hot air balloons is irrelevant to the scope of the Patent, but is potentially useful information. Searches return resumes; a returned resume may include a variety of information against which a search is not run. The Court therefore agrees with JobDiva's proposed construction.

I.   "iterative database query engine" (Monster's '497 Patent)

The parties have agreed that the construction of the term "iterative database query engine" is the most significant to resolution of the case. The term at issue appears in claim 1 of the '497 Patent which states, in relevant part:

> An iterative database query engine, connected to said memory, said engine configured to permit an initial search and at least one subsequent search where said subsequent search operates on the results of said first search and any previous search . . .

('497 Patent, Col. 7, lines 38-42.)

Monster asserts that no construction is necessary—that the plain and ordinary meaning to one skilled in the art is sufficient. However, if construction is needed, an acceptable one is "software that allows searches on a database <u>to narrow or broaden</u> the set of results returned to better match what a user intended to find." (Monster's Opening Claim Construction Brief ("Monster Br.") at 8, ECF No. 39 (emphasis added); <u>see also</u> Monster Reply at 4 n.1.)

At the <u>Markman</u> hearing, Monster's expert on the '497 Patent, Allan, testified that the term referred to "software for accessing a database that provides iterative querying capability." (8/1/14 Tr. at 134.) He also opined that "iterative querying" would have been readily understood by one of ordinary skill in the art during the relevant time period as searching toward a goal "by making searches on a database to narrow or broaden the set of results returned to better match what the user intended to find." (<u>Id.</u>) In response to a question from the Court, he testified that the concept of "broadening" required that the subsequent (broader) query be run against either the entire database or at least a larger set of data than that against which the previous query was run. (<u>Id.</u> at 143.)

According to Allan, the iterative querying process does not require the <u>database</u> on which the engine operates to change for each successive search. (<u>Id.</u> at 134.) Put another way, Allan does not view the claim as <u>requiring</u> that each sequential operation operate on the results of the previous operation. (<u>Id.</u> at 134-35.) The key words in the asserted claim are, then, "permit" and "operates on the results." In fact, the engine might operate on the entire database each time it runs

a query (or it might not). (Id. at 135.) According to Allan, since iterative querying

capability is central, and iterative querying anticipates multiple questions leading

the user toward (not away from) a desired result, it cannot require that only a

limiting database be searched.

JobDiva proposes that this phrase be construed as: "A database query engine

that performs a successive series of sequential operations in which each operation

operates **only on** the results of the previous operation, resulting in a changing

database for each of those successive operations." (Joint Claim Construction and

Prehearing Statement for Monster Counterclaim at 4, ECF No. 36.) According to

JobDiva, any iterative queries operate only on the sub-database consisting of

previous results.

The parties' positions are diametrically opposed. From Monster's

perspective, the querying process—that is, successive searches run by a human

working toward a goal—is the key to the meaning of the term. JobDiva's position is,

effectively, that the "iterative" or successive action is that of the search engine and

not the human researcher. It is the engine, according to JobDiva, which on each

successive search only searches only against the universe of results returned from a

previous search, not the entire database.

Examples may be useful to illustrate the parties' positions. Monster's

position is that, for instance, a hiring manager may initiate a narrow search looking

for a candidate with the following characteristics: five years of experience in Java

programming, speaks fluent Mandarin, has at least a college degree, and will work

on the West Coast. If the results returned are five resumes and the hiring manager wants more, he or she could then conduct a successive, or iterative search, referencing his or her prior search results when doing so. A second, broader search might be "three years of Java programming experience, conversant in Mandarin, no college degree required, will work on the West Coast." According to Monster, this broader but successive search generally would be run against the entire resume database and could well result in more than five resumes. It would, however, have been a search constructed with reference to the results of the prior search. Not so according to JobDiva. JobDiva's position is that the invention only allows each and any successive search to search on the dataset corresponding to the results of the preceding search. Thus, the successive search, while seeming broader, would return only five resumes. By definition, since each of the five previously returned resumes meets the criteria, there would be no change in returned results. According to JobDiva, this immediately apparent limitation of the invention is a result of narrow claim language.

Another example: Monster's position allows a hiring manager to run a successive narrower search, such as by increasing the minimum required duration of experience from five to seven years and keeping all other criteria the same. According to Monster, the search could run against the entire database but would only ultimately return a subset of the five resumes previously returned. An embodiment of the Patent could include a search against only the five previous resumes (i.e., the previous result set), but that embodiment is only one manner of

conducting the desired successive search. JobDiva's position is that the successive search <u>must</u> run against the prior dataset of five resumes.

As another example of the difference between the parties' positions, consider the following: According to Monster, if an initial narrow search returns no results, then a successive search to broaden it would "depend" on the prior results (i.e., the user runs the successive search because the initial search returned zero), but would search the entire database. JobDiva's construction does not allow for this search to be an "iterative" search. JobDiva's position is that if zero results were returned, then the user would need to initiate a <u>new</u>, broader search but could not conduct an "iterative" broader search and hope for any results greater than zero.

Yet another example highlights additional differences: If an initial broad search (e.g., "applicants with five or more years of experience as a lawyer") returns too many results, according to JobDiva, a successive search to narrow the result set (e.g., "five years of experience as a lawyer practicing in the area of patent litigation"), must only run against the set of previously returned results. If the successive search were worded instead as "five years of experience <u>in patent litigation</u>," according to JobDiva, this would also necessarily search only the previously returned universe of lawyers. According to Monster, the search could run against the entire database, resulting in a different set of results altogether insofar as the terms "lawyer" and "litigation" are not equivalent. For instance, a paralegal might have five years of experience in patent litigation and therefore

meet the criteria in the second search but not the first. JobDiva's construction would foreclose this possibility; Monster's would not.

The construction of this term, therefore, requires the Court to determine whether broadening searches could (not necessarily have to) run against the entire or larger database. Put another way, is Monster limited to a construction in which the searched dataset is no broader than the previous dataset—or do its claims allow for or permit an expansion of the searched dataset in successive searches?

The intrinsic evidence supports a construction which permits an iterative search to run against the full (or a broader) dataset. The Specification provides for greater breadth than JobDiva allows.

The "Summary of the Invention" posits a number of broad objects of the invention, including: "It is a further object of the invention to provide a computer implemented system to assist human resource functions. . . . It is a further object of the invention to provide an iterative job search engine. . . . It is a further object of the invention to provide an on-line job and resume search engine." ('497 Patent, Col. 1, lines 54-65.) The breadth of these objects supports Monster's position.

The system is described as consisting of two interacting databases: a resume base and a job base. ('497 Patent, Col. 2, lines 2-4.) "The system will also include an iterative search engine which handles queries to the resume base and job base." ('497 Patent, Col. 4, lines 6-8.) The iterative search engine may be implemented through "commercially available database management systems. Other conventional search and query capabilities may also be used to search the

72

database." ('497 Patent, Col. 4, lines 11-14.) Importantly, the reference to

conventional search and query capabilities points one to what was known to one of

skill in the art, not a sui generis variation.

The system also provides for pre-programmed but automated querying:

"[T]he system may be configured to periodically query the resume base for resume

records which are related to job records, and, therefore, constitute applications for

specific job postings." ('497 Patent, Col. 5, lines 7-10.) This suggests that a human

resources person might want to periodically check on "what's new." This entails

iterative querying specifically not against the prior dataset but against new data

entered. This embodiment would be foreclosed by JobDiva's construction.

Further, the description of the querying process supports Monster's position.

The iterative search engine may be invoked by either an applicant-user or by an

employer-user. ('497 Patent, Col. 6, lines 1-4.) "When the iterative search engine is

invoked to search the job base, a number of scroll bar type menus may be presented

to a user. The scroll bar menus can correspond to the various search parameters

and pieces of a job record. The menu presents predetermined options corresponding

to the available entries for the various fields. The user then selects query entries

from the options presented." ('497 Patent, Col. 6, lines 4-11.) Fields that are not

limited to predetermined entries may be queried using key words. ('497 Patent, Col.

6, lines 11-13.) If the search returns a plurality of records, "additional iterations of

the search may be executed." ('497 Patent, Col. 6, lines 15-16.) The scroll bars are

then represented to the user; upon re-presentment, rather than displaying the

entire universe of available entries for each field, only the entries corresponding to records of entries <u>selected</u> in the previous iteration are displayed. ('497 Patent, Col. 6, lines 16-21.) The user can then further narrow the selection and submit additional iterative queries. ('497 Patent, Col. 6, lines 21-22.)

Nothing in the Specification limits the dataset against which a successive search can be run. The only narrowed options to which the Specification refers relate to allowing and enabling a universe of scroll bars from which the user can then make selections. Put another way, if a user selected "High-Tech" from the scroll bar menu of industries, upon re-presentment, he or she could see "High-Tech" already in front him or her, thus saving a certain amount of time necessary to sort through scroll bar menus. This efficiently allows a successive search to use (or operate on) a prior search, but nothing in the Specification suggests that the user could not return to the full scroll bar menu and obtain the broader universe if desired. Also, the Specification specifically provides for keyword searching. Nothing prevents a broadening rather than narrowing of keywords.

JobDiva points to the portion of the Specification set out above as supporting only narrowing rather than broadening iterations. This is an unduly circumscribed reading of the Patent. As discussed above, the narrowing relates to scroll menus, not the dataset against which searches are conducted. In any event, the language is descriptive of only one embodiment. The law does not limit Monster to only those embodiments referenced in the Patent. <u>See</u> <u>Hill-Rom Servs., Inc. v. Stryker Corp.</u>, 755 F.3d 1367, 1371 (Fed. Cir. 2014) ("While we read claims in view of the

specification, of which they are a part, we do not read limitations from the embodiments in the specification into the claims.").

JobDiva also refers to the prosecution history of the '497 Patent as requiring iterative searches cannot be run against broadening datasets. According to JobDiva, Monster made representations to the Patent Office to which it should be bound. See Typhoon Touch Techs., Inc. v. Dell, Inc., 659 F.3d 1376, 1381 (Fed. Cir. 2011) ("The patentee is bound by representations made and actions that were taken in order to obtain the patent."); Gillespie v. Dywidag Sys. Int'l, USA, 501 F.3d 1285, 1291 (Fed. Cir. 2007) ("The patentee is held to what he declares during the prosecution of his patent.").

In particular, JobDiva refers to various places in the prosecution history in which the applicant defined the word "iterative" as successive. (See, e.g., Declaration of Jeremy D. Wilson in Support of JobDiva's Response to Monster's Opening Claim Construction Brief ("Wilson Decl.") Ex. A at MONJD075218, ECF No. 56-1.) In context, these references all follow the phrase "through common industry usage." (See, e.g., id.) Neither expert disputes that "iterative" means "successive," or that one of ordinary skill in the art would understand "iterative" to mean "successive." The dispute is, rather, the database against which the successive search is run.

In this regard, JobDiva cites prosecution history from 1997 and 1998, in which the applicant attempted to overcome a § 102 rejection as anticipated by Cummings and a § 103 rejection as obvious based on Clark. (See Wilson Decl. Ex. A

at MONJD075218-19, MONJD075239-40, MONJD075271.) The first two of these reference are generally the same.

For instance, in connection with trying to overcome a § 102 objection based on the Cummings reference, the applicant stated:

> While the existence of a database query engine might be inferred from the Cummings reference, he does not state that such engine uses an iterative process, nor does he imply that anywhere in the reference. Through common industry usage, the term 'iterative' denotes a successive series of sequential operations in which each operation operates **only on** the results of the previous operation, **resulting in a changing database** for each of those successive operations.

(Wilson Decl. Ex. A at MONJD075218 (emphases added).) The key phrase, according to JobDiva, is the reference to operating "only on" the results of the previous operation, resulting in a "changing database." As an initial matter, the distinction between Cummings and claim 1 of the '497 invention is the use of a search engine configured to allow an "iterative process." Nothing in this language suggests that the distinction is, instead, a unidirectional iterative process of never-broadening searches. Nothing in the '497 Specification suggests lexicography regarding "iterative" unique to the Patent.

The January 16, 1998 reference to Clark in connection with the § 103 rejection uses different language:

> Clark does describe a system which makes multiple passes through the database using different search criteria each time. However, each one of these passes operates on the entire database, not on the results of a previous pass. By operating on the same entire database every time, Clark actually teaches away from this iterative process. Unlike Clark, Applicant's iterative approach **permits** each successive pass to operate **on a smaller set of data** than the previous pass.

(See Wilson Decl. Ex. A at MONJD075271 (emphases added).) According to

JobDiva, this statement binds the applicant evermore to iterative searching against

an ever-smaller dataset. This reads limitations into the language which do not

exist. Instead, this statement suggests that the search is permitted to run against a

smaller database on each successive search, but that it is not required to do so.

Consider an initial search which returns "zero" results. Running a successive

search against a "zero" result set makes no sense but would be all that JobDiva's

reading allows. This would undermine the very concept of an iterative search.

JobDiva cites a rejection by the PTO on the basis that an iterative database

query engine was disclosed in the prior art, namely in the Parrish et al. reference.

(See Wilson Decl. Ex. A at MONJD075279-80.) This acknowledges that the

applicant was simply referring to routine industry usage of the term "iterative"—

not some unique definition. (Otherwise, prior art referencing standard "iterative"

usage would not have created an issue.) JobDiva concedes that the amendment

Monster made to overcome this rejection was not some change in the definition of

"iterative," but rather an addition of the term "wherein the job records each contain

a plurality of job records each having a plurality of search key fields." (Wilson Decl.

Ex. A at MONJD075289-90.) In May of 1988, in reliance on this amendment, the

claim was allowed. (Wilson Decl. Ex. A at MONJD075295.)

Monster points to negotiations between the applicant and the PTO regarding

patentability. In particular, Monster points to further communications between the

applicant and patent examiner as to the meaning of the word "iterative." In a

separate office action submission in August of 1997, the applicant changed its description of "iterative database query engine" from "operates only on" prior results to "operates on" prior results. (See Wilson Decl. Ex. A at MONJD075239.) Monster argues that this difference is a substantial one and confirms the breadth of its claim. Then, in September of 1997, the PTO stated, "Because the term iterative could also denote the act of execution on one or more statement of instructions repeatedly, the specification needs to state what exactly is meant by the term iterative." (Wilson Decl. Ex. A at MONJD075258.) In the January 1998 amendment, the applicant responded that the main issue in the rejection was the definition of the word "iterative," and that "in the interest of expediting prosecution, claim 1 has been modified to more fully describe the iterative function." (Wilson Decl. Ex. A at MONJD075270.) The applicant further stated, "As amended, claim 1 requires that the iterative database query engine can perform two or more sequential searches, with each search operating on the results of a previous search (except for the initial search, of course, for which there are no previous results on which to operate)." (Wilson Decl. Ex. A at MONJD075270-71.)

A September 1997 statement by the examiner acknowledges that the issue with the "iterative" search engine was that "iterative" was a broad term. (See Declaration of Robert L. Masterson in Support of Monster's Opening Claim Construction Brief ("Masterson Decl.") Ex. 9 at 12, ECF No. 40-20.) In particular, the term "could also denote the act of execution on one or more statement of instructions repeatedly." (Id.) In this context, the applicant's subsequent

amendment—of sequential searches operating on the results of a previous search—

is concerned with the instructions issued by the user, not the dataset. This is

consistent with the description in the Specification focused on efficient use of the

scroll bar. ('497 Patent, Col. 6, lines 17-22.) Claim 1 itself, as amended, states, in

relevant part: "an iterative database query engine connected to said memory, said

engine configured to permit an initial search and at least one subsequent search

where said subsequent search operates on the results of said first search and any

previous search." ('497 Patent, Col. 7, lines 38-42.)

Monster argues that the context provided by reading the entire prosecution

history shows that the statements in the April 1997 Office Action do not meet the

Federal Circuit's standard for a clear and unmistakable disclaimer. Ecolab, Inc. v.

FMC Corp., 569 F.3d 1335, 1343 (Fed. Cir. 2009) ("[W]hen [the inventor's]

statements are considered in the context of the prosecution history as a whole, they

simply are not clear and unmistakable enough to invoke the doctrine of prosecution

history disclaimer."); see also Phillips, 415 F.3d at 1317 ("[B]ecause the prosecution

history represents an ongoing negotiation between the PTO and the applicant,

rather than the final product of that negotiation, it often lacks the clarity of the

specification and thus is less useful for claim construction purposes."). The Court

agrees. Moreover, the final amendment and approval demonstrate that the size of

the database was not relied upon by the PTO for patentability—the records

containing a plurality of search key fields was.

How, then, is the Court to decide between the parties' divergent positions? The key is how one of ordinary skill in the art at the time (1995) defined an "iterative database query engine." The parties' experts differ on this point. The Court heard the testimony and cross-examination of the experts and has weighed the evidence in this regard. The Court determines that Allan more accurately presents the view of one of ordinary skill in the art at the time.

Allan testified consistently and credibly that one of ordinary skill in the art at the time of the patent application would have understood an iterative querying database query engine as software for accessing a database that provides iterative querying, and that a user could search on a database to narrow or broaden the set of search results to better match was the user intended to find. (See 8/1/14 Tr. at 134; Masterson Decl. Ex. 2 ("Allan Decl.") ¶ 29, ECF No. 40-2.) JobDiva criticizes Allan's opinions as based on extrinsic and not intrinsic evidence (see, e.g., 8/1/14 Tr. at 135)—and argues that the intrinsic evidence is sufficiently clear that it is unnecessary (and therefore inappropriate) to refer to extrinsic evidence.

Allan testified that, based on his experience, one of ordinary skill in the art would understand iterative database query engine to permit successive searches. That opinion enables the Court to assess the intrinsic evidence from the perspective of one of ordinary skill in the art. The Court views Polish's opinions on this issue similarly: how he, as one of ordinary skill in the art at the time, would understand the term. The articles Allan references to support his view are often categorized as extrinsic evidence. However, they are supportive of the basis for his opinion in this

contested setting. The articles, however characterized, are properly considered as part of claim construction. The articles provide additional support for Allan's position on a disputed issue.

Among the articles Allan cites is a 1991 publication by Christopher Owens entitled, "A Proposal for Qualitative Relevance Feedback in Biomedical Information Retrieval." (Allan Decl. ¶ 33.) In that article, Owens states: "A key feature of online searching is that searches performed by librarians and experienced searchers tend to be **iterative**: The user makes an initial query, and the system returns some documents. Generally the user can examine the returned documents and reformulate the query to broaden, narrow, or shift the search." (Id.) In another 1991 article, this one entitled "Improving the Retrieval of Information from External Sources," Susan T. Dumais wrote: "With increases in computer speed, interactive or iterative searchers are common, and users can reformulate queries in light of the system's response to previous queries." (Id. ¶ 34.) A 1989 article by Charles R. Hildreth, entitled "Intelligent Interfaces and Retrieval Methods," states that "[r]elevance feedback may lead to a refinement or expansion of the user's query and 'fuel' the system for even better performance." (Id. ¶ 38.) Other scholarly works to which Allan refers make similar points. (See id. at ¶¶ 39-46.) The references stand as the sole source apart from the testimony of the experts and statements made in the prosecution history as to the meaning of the term "iterative." They confirm that Monster's position—of "iterative" as "successive"—is correct. They also confirm that "successive" simply means "following" or "next," and

does not impose any constraints on the size of the database searched. Nothing in any of the references precludes broadening iterative searching.

JobDiva proffered the testimony of Nathaniel Polish, Ph.D., in support of its construction of this term. The Court found Polish not as well informed as Allan. Polish lacked specific and credible support for his position. Polish testified that he had not looked for any scientific literature to support his view on this term. (8/1/14 Tr. at 148 ("I haven't looked for any scientific literature to support that, no.").) In response to the Court's question whether there was anything to which he could point as an example of the type of iterative database query engine he opined was reflected in the '497 Patent, Polish responded, "I haven't cited to anything or found anything in particular." (8/1/14 Tr. at 150.)

On balance, the Court was persuaded by the combination of evidence presented on this term by Monster. Notably, JobDiva previously has conceded that iterative search engines were "well-known in the art going as far back as 1968, and were routinely used to retrieve information from a computer system comprising multiple databases." (Masterson Decl. Ex. 4 at 11, ECF No. 40-15.)

Polish opines that one skilled in the art in 1995 would have understood that a subsequent search of an iterative database query engine operated only on the results of the previous operation. (See Declaration of Nathaniel Polish, Ph.D., in Support of JobDiva's Response to Monster's Opening Claim Construction Brief ("Polish Decl." ¶¶ 14-15, ECF No 55.) According to Polish, iterative database query engines were well known in 1995 for having advantages when searching over large

data sets. (Id. ¶ 15.) Because computers were slower than today, repeated

searching absorbed processor resources and time. (Id.) Successively narrow

searches thus could enable subsequent searches to proceed faster and more

efficiently. (Id.) Polish does not, however, cite any publications which support his

view. He conceded at the Markman hearing that he was relying on his reading of

the prosecution history of the '497 Patent, not on the state of the art at the time of

the invention apart from the Patent. (See 8/1/14 Tr. at 147-48.) He also refers to

the same portions of the Specification to which JobDiva referred and which are

discussed above.

He testified that Allan was positing a scenario of multiple new queries—not

an iterative query process. (8/1/14 Tr. at 150.) The infirmity of Polish's position

was revealed in his response to a question posed by the Court. The Court asked

Polish whether, according to his understanding of the Patent, a first search which

requested resumes where the candidate had experience in "Java" could be followed

by a subsequent search asking for candidates with experience in "Java or C++" as

well as "Java and C++"—the former search being a broadening search and the latter

a narrowing search. (See 8/1/14 Tr. at 156-57.) Polish reads the claim language to

allow only the narrowing search. (Id.) There is nothing in the text of the

Specification, however, which supports the view that an iterative database query

engine cannot support an "or" subsequent search just as well as it can support an

"and" subsequent search. Similarly, the Specification does allow a subsequent

narrowing search (the "and" search in the Java/C++ example above) to run against
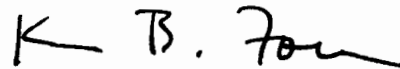
83

the entire database or against the previously returned results. In short, JobDiva's interpretation would result in an invention that was a lemon ab initio: a search engine that could not perform an effective search if effective search required a broader search than the previous one.

Finally, the Specification is agnostic as to which terms are entered in a search field—and does not require successively narrowing searches. ('497 Patent, Col. 6, lines 11-12 ("[F]ields which are not limited to predetermined entries may be queried using a key word or literal string inquiry.").) There is, in short, nothing which constrains successive searches to terms or language which lead to a narrower search. It would be contrary to the state of the art at the time of the invention to have had designed a search capability that was inherently incapable of returning a set of relevant results simply because the second search had to "operate on" the results of the first.

Accordingly, the Court finds that Monster's proposed construction is appropriate. As this determination required the Court to weigh conflicting expert testimony, its determination is a mixed question of law and fact.

SO ORDERED.

Dated: New York, New York
        October 3, 2014

K B. For

KATHERINE B. FORREST
United States District Judge